

NFD

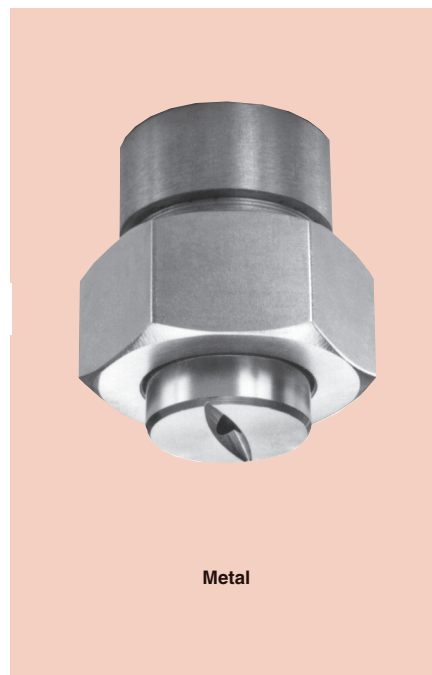
Dovetail Flat Fan

DESIGN FEATURES

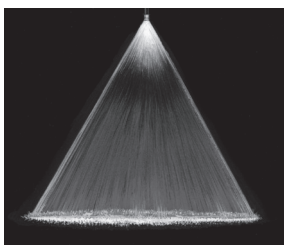
- Dovetail joint guarantees alignment of interchangeable tips
- Dimensionally compatible with other dovetail systems
- Tips offset 5° or 15° for overlapping spray patterns
- Tapered overlapping spray provides uniform coverage
- Male, female and welded connections
- Other sizes available upon request

SPRAY CHARACTERISTICS

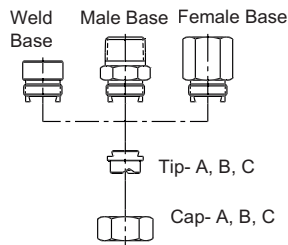
- **Spray pattern:** Flat Fan
- **Spray angles:** 20°, 30°, 45°, 60°, 90°, and 120°. Special angles are available on request
- **Flow rates:** 0.159 to 358 l/min



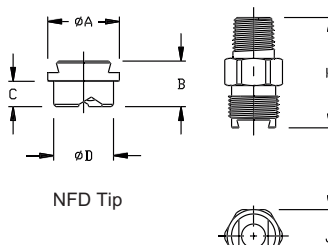
Metal



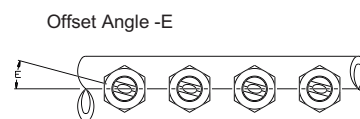
Fan 45°



NFD Components



NFD Base



Assembly with welded connection

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

NFD Flow Rates and Dimensions

Fan, 20°, 30°, 45°, 60°, 90°, 120° Spray Angles, 1/4", 3/8", 1/2", 3/4" and 1-1/4" Pipe Size, BSP or NPT, or Welded Connections

Cap & Tip Size	Nozzle Number	Base Sizes* Available	K Factor	LITERS PER MINUTE @ BAR							Equiv. Orifice Dia. (mm)	Approximate Tip Dimensions (mm)				Wt. (g)	BSP NPT Pipe	Approx. Base Dim. (mm)		
				0.5 bar	1 bar	2 bar	3 bar	5 bar	7 bar	10 bar		A	B	C	D			E	J	K
A	NFD 010	1/4 3/8 1/2	0.225	0.159	0.225	0.318	0.390	0.503	0.596	0.712	0.700	14.8	12	5°	42	1/4"	17.5	36.5		
	NFD 014	1/4 3/8 1/2	0.318	0.225	0.318	0.449	0.550	0.710	0.840	1.00	0.900									
	NFD 019	1/4 3/8 1/2	0.445	0.314	0.445	0.629	0.770	0.994	1.18	1.41	1.00									
	NFD 031	1/4 3/8 1/2	0.704	0.498	0.704	0.996	1.22	1.58	1.86	2.23	1.20									
	NFD 039	1/4 3/8 1/2	0.883	0.625	0.883	1.25	1.53	1.98	2.34	2.79	1.35	7	12	3/8"	17.5	36.5				
	NFD 050	1/4 3/8 1/2	1.13	0.800	1.13	1.60	1.96	2.53	2.99	3.58	1.50									
	NFD 059	1/4 3/8 1/2	1.34	0.947	1.34	1.89	2.32	3.00	3.54	4.24	1.65									
	NFD 077	1/4 3/8 1/2	1.77	1.25	1.77	2.50	3.06	3.95	4.67	5.59	2.00									
	NFD 097	1/4 3/8 1/2	2.22	1.57	2.22	3.14	3.85	4.97	5.88	7.03	2.20	20								
	NFD 12	1/4 3/8 1/2	2.82	2.00	2.82	3.99	4.89	6.31	7.47	8.93	2.50									
NFD 15	1/4 3/8 1/2	3.35	2.37	3.35	4.74	5.81	7.50	8.87	10.6	2.70										
B	NFD 20	3/4	4.45	3.15	4.45	6.30	7.71	10.0	11.8	14.1	3.00	24	15	15°	168	1/2"	22	44.5		
	NFD 25	3/4	5.65	4.00	5.65	7.99	9.79	12.6	15.0	17.9	3.50									
	NFD 31	3/4	7.04	4.98	7.04	9.96	12.2	15.8	18.6	22.3	4.00									
	NFD 39	3/4	8.83	6.25	8.83	12.5	15.3	19.8	23.4	27.9	4.50									
	NFD 50	3/4	11.3	8.00	11.3	16.0	19.6	25.3	29.9	35.8	5.00	9	20	3/4"	28.5	51				
	NFD 62	3/4	14.1	10.0	14.1	20.0	24.5	31.6	37.4	44.7	5.50									
	NFD 77	3/4	17.7	12.5	17.7	25.0	30.6	39.5	46.7	55.9	6.00									
	NFD 87	3/4	19.8	14.0	19.8	28.0	34.3	44.3	52.4	62.6	6.40									
	NFD 104	3/4	23.7	16.7	23.7	33.5	41.0	52.9	62.6	74.9	7.20	118	141							
	NFD 124	3/4	28.3	20.0	28.3	40.0	49.0	63.3	74.8	89.5	8.00									
	NFD 155	3/4	35.3	25.0	35.3	50.0	61.2	79.0	93.5	112	9.00									
	NFD 195	3/4	44.5	31.4	44.5	62.9	77.0	99.4	118	141	10.0									
C	NFD 124	1-1/4	28.3	20.0	28.3	40.0	49.0	63.2	74.8	89.5	8.00	38.5	22	13.5	32	15°	224	1-1/4"	44.5	63.5
	NFD 195	1-1/4	44.5	31.4	44.5	62.9	77.0	99.4	118	141	10.0									
	NFD 309	1-1/4	70.4	49.8	70.4	100	122	158	186	223	12.0									
	NFD 496	1-1/4	113	80.0	113	160	196	253	299	358	15.0--									

Flow Rate (l/min) = $K \sqrt{\text{bar}}$ * NPT, BSP, male or female or weldable connections. Dimensions are for male base, female and weldable vary.

Standard Materials: Brass, 303 Stainless Steel, and 316 Stainless Steel Weldable adapters also available in mild steel.

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

www.BETE.com

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