

NFD

Dovetail Flat Fan

DESIGN FEATURES

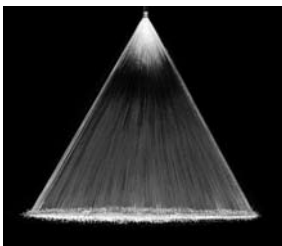
- Dovetail joint guarantees alignment of interchangeable tips
- Dimensionally compatible with other dovetail systems
- Tips offset 5° or 15° for overlapping spray patterns
- Tapered overlapping spray provides uniform coverage
- Male, female and welded connections
- Other sizes available upon request

SPRAY CHARACTERISTICS

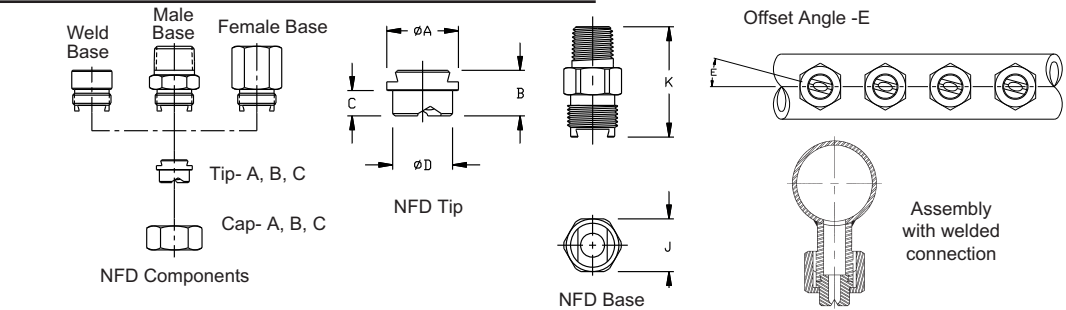
Spray pattern: Flat Fan
Spray angles: 20°, 30°, 45°, 60°, 90° and 120°. Special angles are available on request
Flow rates: 0.04 to 157 gpm



Metal



Fan 45°



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, or Welded Connections

Cap & Tip Size	Nozzle Number	Base Sizes* Available	K Factor	GALLONS PER MINUTE @ PSI							Equiv. Orifice Dia. (in.)	Approximate Tip Dimensions (in.)					Wt. (Oz.)	BSP NPT Pipe	Approx. Base Dim. (in.)		
				10 PSI	20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	200 PSI		400 PSI	A	B	C	D			E	J	K
A	NFD 010	1/4 3/8 1/2	0.016	0.049	0.070	0.10	0.12	0.14	0.16	0.22	0.31	0.028	0.58	5°	1.5	1/4"	0.69	1.44			
	NFD 014	1/4 3/8 1/2	0.022	0.070	0.10	0.14	0.17	0.20	0.22	0.31	0.44	0.035									
	NFD 019	1/4 3/8 1/2	0.031	0.10	0.14	0.19	0.24	0.28	0.31	0.44	0.62	0.039									
	NFD 031	1/4 3/8 1/2	0.049	0.15	0.22	0.31	0.38	0.44	0.49	0.69	0.98	0.047	0.47	5°	1.5	3/8"	0.69	1.44			
	NFD 039	1/4 3/8 1/2	0.061	0.19	0.27	0.39	0.47	0.55	0.61	0.87	1.22	0.053									
	NFD 050	1/4 3/8 1/2	0.078	0.25	0.35	0.50	0.61	0.70	0.78	1.10	1.56	0.059									
	NFD 059	1/4 3/8 1/2	0.093	0.29	0.42	0.59	0.72	0.83	0.93	1.32	1.86	0.065	0.28	5°	1.5	3/8"	0.69	1.44			
	NFD 077	1/4 3/8 1/2	0.122	0.39	0.55	0.77	0.95	1.10	1.22	1.73	2.44	0.079									
	NFD 097	1/4 3/8 1/2	0.154	0.49	0.69	0.97	1.19	1.38	1.54	2.18	3.08	0.087									
	NFD 12	1/4 3/8 1/2	0.196	0.62	0.88	1.24	1.52	1.75	1.96	2.77	3.92	0.098	0.47	5°	1.5	3/8"	0.69	1.44			
NFD 15	1/4 3/8 1/2	0.233	0.74	1.04	1.47	1.80	2.08	2.33	3.30	4.66	0.106										
NFD 49	1/4 3/8 1/2	0.781	2.47	3.49	4.94	6.05	6.98	7.81	11.0	15.6	0.197										
B	NFD 20	3/4	0.309	0.98	1.38	1.95	2.39	2.76	3.09	4.37	6.18	0.118	0.94	6.0	1.5	1/2"	0.88	1.75			
	NFD 25	3/4	0.392	1.24	1.75	2.48	3.04	3.50	3.92	5.54	7.84	0.138									
	NFD 31	3/4	0.488	1.54	2.18	3.09	3.78	4.37	4.88	6.90	9.76	0.157									
	NFD 39	3/4	0.612	1.94	2.74	3.87	4.74	5.48	6.12	8.65	12.2	0.177	0.59	6.0	1.5	3/4"	1.12	2.00			
	NFD 50	3/4	0.785	2.48	3.51	4.95	6.08	7.02	7.85	11.1	15.6	0.197									
	NFD 62	3/4	0.981	3.10	4.39	6.21	7.60	8.77	9.81	13.9	19.6	0.217									
	NFD 77	3/4	1.22	3.87	5.48	7.72	9.49	11.0	12.2	17.2	24.4	0.236	0.36	15°	8.0	1-1/4"	1.75	2.50			
	NFD 87	3/4	1.37	4.34	6.14	8.66	10.6	12.3	13.7	19.4	27.4	0.252									
	NFD 104	3/4	1.64	5.19	7.34	10.4	12.7	14.7	16.4	23.2	32.8	0.283									
	NFD 124	3/4	1.96	6.20	8.77	12.4	15.2	17.5	19.6	27.7	39.2	0.315	0.79	15°	8.0	1-1/4"	1.75	2.50			
NFD 155	3/4	2.45	7.75	11.0	15.5	19.0	21.9	24.5	34.6	49.0	0.354										
NFD 195	3/4	3.08	9.75	13.8	19.5	23.9	27.6	30.8	43.6	61.6	0.394										
C	NFD 124	1- 1/4	1.96	6.20	8.77	12.4	15.2	17.5	19.6	27.7	39.2	0.315	1.51	0.87	0.53	1.26	15°	8.0	1-1/4"	1.75	2.50
	NFD 195	1- 1/4	3.08	9.75	13.8	19.5	23.9	27.6	30.8	43.6	61.6	0.394									
	NFD 309	1- 1/4	4.88	15.4	21.8	30.9	37.8	43.7	48.8	69.1	97.6	0.475									
	NFD 496**	1- 1/4	7.85	24.8	35.1	49.6	60.8	70.2	78.5	111	157	0.591									

**NFD 496 not available in 120°

Flow Rate (GPM) = $K\sqrt{PSI}$ *NPT, BSP, male or female or weldable pipe 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.

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