

# NFS

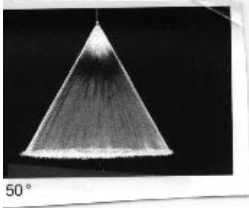
## Stubby Flat Fan

### DESIGN FEATURES

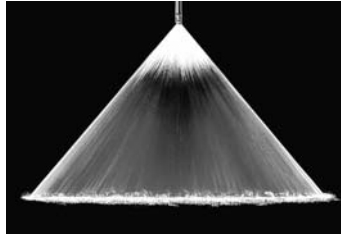
- Extremely short length for minimum projection and maximum clearance
- Produces a flat fan spray pattern available in a variety of spray angles
- Available in straight (parallel) threads only, NPSM and G
- Requires gasket to seal connection

### SPRAY CHARACTERISTICS

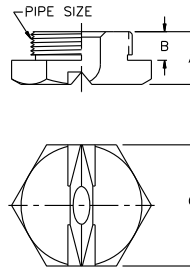
**Spray pattern:** Fan  
**Spray angles:** 20°, 30°, 45°, 60°, 90° and 120° standard  
**Flow rates:** 0.049 to 295 gpm



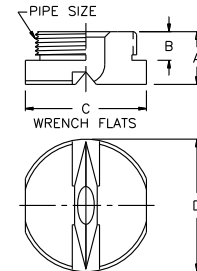
Fan 45°



Fan 90°



Metal



Plastic

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

### NFS Flow Rates and Dimensions

Flat Fan, 20°, 30°, 45°, 60°, 90° & 120° Spray Angles, 1/4" to 2" Pipe Sizes

** Male Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI											Equiv. Orifice Dia. (in)	
			5 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	150 PSI	200 PSI		
1/4	NFS 012	0.020	0.04	0.06	0.08	0.09	0.11	0.12	0.15	0.18	0.20	0.24	0.28	0.0315	
	NFS 019	0.031	0.07	0.10	0.12	0.14	0.17	0.19	0.24	0.28	0.31	0.38	0.44	0.0394	
	NFS 031	0.049	0.11	0.16	0.19	0.22	0.27	0.31	0.38	0.44	0.49	0.60	0.70	0.0472	
	NFS 039	0.061	0.14	0.19	0.24	0.27	0.34	0.39	0.47	0.55	0.61	0.75	0.87	0.0531	
	NFS 050	0.078	0.18	0.25	0.30	0.35	0.43	0.50	0.61	0.70	0.78	0.96	1.11	0.0591	
	NFS 059	0.093	0.21	0.29	0.36	0.42	0.51	0.59	0.72	0.83	0.93	1.14	1.32	0.0650	
	NFS 077	0.122	0.27	0.39	0.47	0.55	0.67	0.77	0.95	1.10	1.22	1.50	1.73	0.0787	
	NFS 098	0.155	0.35	0.49	0.60	0.69	0.85	0.98	1.20	1.38	1.55	1.89	2.19	0.0866	
	NFS 12	0.196	0.44	0.62	0.76	0.88	1.07	1.24	1.52	1.75	1.96	2.40	2.77	0.0984	
NFS 15	0.233	0.52	0.74	0.90	1.04	1.28	1.47	1.80	2.08	2.33	2.85	3.29	0.106		
1/4 or 3/4"	NFS 20	0.309	0.69	0.98	1.20	1.38	1.69	1.97	2.39	2.76	3.09	3.78	4.36	0.118	
	NFS 25	0.392	0.88	1.24	1.52	1.75	2.15	2.48	3.04	3.51	3.92	4.80	5.55	0.138	
	NFS 31	0.492	1.10	1.56	1.91	2.20	2.70	3.11	3.81	4.40	4.92	6.03	6.96	0.157	
	NFS 39	0.612	1.37	1.94	2.37	2.74	3.35	3.87	4.74	5.48	6.12	7.50	8.66	0.177	
	NFS 50	0.785	1.75	2.48	3.04	3.51	4.30	4.96	6.08	7.02	7.85	9.61	11.1	0.197	
	NFS 62	0.981	2.19	3.10	3.80	4.39	5.37	6.25	7.60	8.77	9.81	12.0	13.9	0.217	
3/4"	NFS 77	1.22	2.74	3.87	4.74	5.48	6.71	7.75	9.49	11.0	12.2	15.0	17.3	0.236	
	NFS 93	1.47	3.28	4.65	5.69	6.57	8.05	9.29	11.4	13.1	14.7	18.0	20.8	0.272	
	NFS 124	1.96	4.39	6.20	7.60	8.77	10.7	12.4	15.2	17.5	19.6	24.0	27.7	0.315	
3/4" or 1-1/4"	NFS 155	2.45	5.48	7.75	9.49	11.0	13.4	15.5	19.0	21.9	24.5	30.0	34.6	0.354	
	NFS 185	3.22	6.53	9.24	11.3	13.1	16.0	18.5	22.6	26.1	29.2	35.8	41.3	0.374	
	NFS 195	3.09	6.91	9.77	12.0	13.8	16.9	19.5	23.9	27.6	30.9	37.8	43.7	0.394	
	NFS 309	4.88	10.9	15.4	18.9	21.8	26.7	30.9	37.8	43.7	48.8	59.8	69.1	0.472	
1-1/4"	NFS 496	7.85	17.5	24.8	30.4	35.1	43.0	49.6	60.8	70.2	78.5	96.1	111	0.591	
	NFS 557	8.81	19.7	27.8	34.1	39.4	48.2	55.7	68.2	78.8	88.1	108	125	0.630	
	NFS 620	9.81	21.9	31.0	38.0	43.9	53.7	62.0	76.0	87.7	98.1	120	139	0.669	
	NFS 775	12.2	27.4	38.7	47.4	54.8	67.1	77.5	94.9	110	122	150	173	0.748	
	NFS 977	15.5	34.5	48.9	59.8	69.1	84.6	97.7	120	138	155	189	219	0.827	
	NFS 1130	17.9	40.0	56.6	69.3	80.0	98.0	113	139	160	179	219	253	0.886	
	NFS 1320	20.9	46.6	65.9	80.8	93.3	114	132	162	187	209	255	295	0.965	
	2"	NFS 124	1.96	4.39	6.20	7.60	8.77	10.7	12.4	15.2	17.5	19.6	24.0	27.7	0.315
		NFS 155	2.45	5.48	7.75	9.49	11.0	13.4	15.5	19.0	21.9	24.5	30.0	34.6	0.354
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Flow Rate (GPM) =  $K \sqrt{PSI}$  \*\*Available in straight (parallel) threads only, NPSM and G.

Standard Materials: Brass, 316 Stainless Steel, 303 Stainless Steel and PVC.

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