

NFS

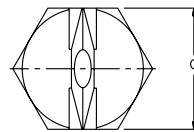
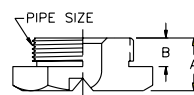
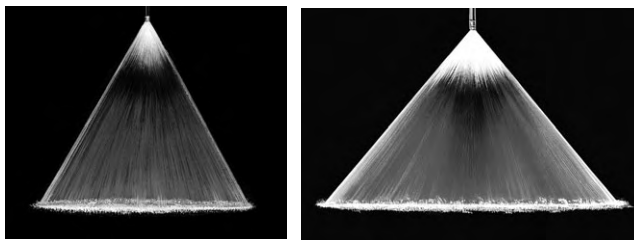
Stubby Flat Fan

DESIGN FEATURES

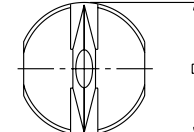
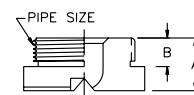
- Extremely short length for minimum projection and maximum clearance
- Produces a flat fan spray pattern available in a variety of spray angles
- Available in straight (parallel) threads only, NPS and BSPP
- Requires gasket to seal connection

SPRAY CHARACTERISTICS

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



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	
3/4"	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	
	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	
3/4" or 1-1/4"	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	
	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	2.92	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	
1-1/4"	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	
	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	
2	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	

NFS Dimensions and Spray Angles

Pipe Size	Nozzle Number	Spray Angles Available	Dimensions (in)			
			A	B	C	D
1/4	NFS 012 To NFS 39	20° 30° 45° 60° 90° 120°	0.47			
	NFS 50	20° 30° 45° 60° 90°	0.69			
	NFS 62 To NFS 77	45° 60° 90° 45°	0.75			
3/4	NFS 20 To NFS 77	20° 30° 45° 60° 90° 120°	0.59			
	NFS 93*	120°	0.31			
	NFS 124	20° 30° 45° 60° 90° 120°	1.25			
	NFS 155 To NFS 309	20° 30° 45° 60° 90° 120°	1.38			
	NFS 124 To NFS 496	20° 30° 45° 60° 90° 120°	0.87	0.47	2.0	
2	NFS 557 To NFS 1320	20° 30° 45° 60° 90° 120°	1.25	0.79	2.75	
			3.0			

Flow Rate (GPM) = $K\sqrt{PSI}$ *NF93 available in 120° only **Available in straight (parallel threads only), NPS and BSPP

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.