NFS

Stubby Flat Fan

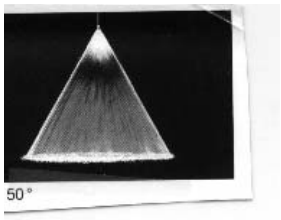
Metal

DESIGN FEATURES

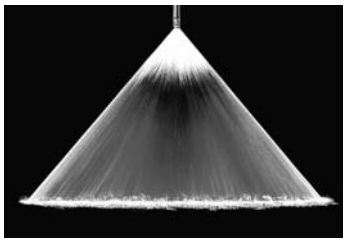
- Extremely short length for minimum projection and maximum clearance
- Produces a flat fan spray pattern available in a variety of spray angles
- Available in straight (parallel) threads only, NPSM and G
- Requires gasket to seal connection

SPRAY CHARACTERISTICS

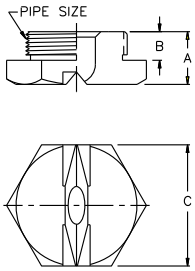
Spray pattern: Fan
Spray angles: 20°, 30°, 45°, 60°, 90° and 120° standard
Flow rates: 0.049 to 295 gpm



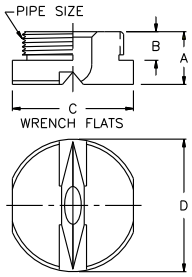
Fan 45°



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 5 PSI	10 PSI	15 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	150 PSI	200 PSI	Equiv. Orifice Dia. (in)
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
	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"	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
3/4" or 1-1/4	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

Flow Rate (GPM) = $K\sqrt{PSI}$ ***Available in straight (parallel) threads only, NPSM and G.*

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	0.28		
	NFS 50	20° 30° 45° 60° 90°				0.69
	NFS 62	45° 60° 90°				
	NFS 77	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°				
	NFS 155	20° 30° 45° 60° 90° 120°				1.25
	NFS 185	120°				
	NFS 195	20° 30° 45° 60° 90° 120°				1.38
	NFS 309	20° 30° 45° 60° 90° 120°				
1-1/4	NFS 124 To NFS 496	20° 30° 45° 60° 90° 120°	0.87	0.47	2.0	2.18
2	NFS 557 To NFS 1320	20° 30° 45° 60° 90° 120°	1.25	0.79	2.75	3.0

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.