

# 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 G
- Requires gasket to seal connection

### SPRAY CHARACTERISTICS

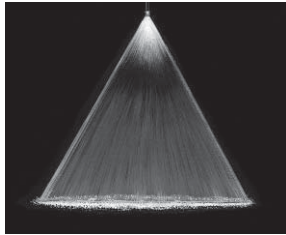
Spray pattern: Fan

Spray angles: 20°, 30°, 45°, 60°, 90° and 120° standard

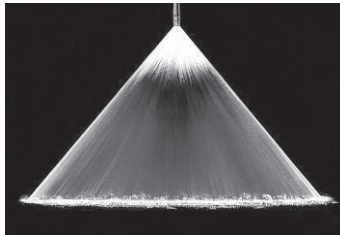
Flow rates: 0.20 to 951 l/min



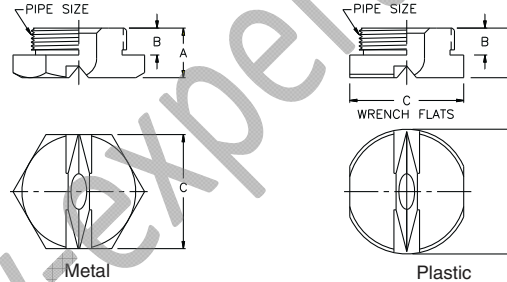
Metal



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	LITERS PER MINUTE @ BAR							Equiv. Orifice Dia. (mm)
			0.5 bar	1 bar	2 bar	3 bar	5 bar	7 bar	10 bar	
1/4"	NFS 012	0.28	0.20	0.28	0.40	0.49	0.63	0.75	0.89	0.800
	NFS 019	0.44	0.31	0.44	0.63	0.77	0.99	1.18	1.41	1.00
	NFS 031	0.71	0.50	0.71	1.00	1.23	1.59	1.88	2.25	1.20
	NFS 039	0.88	0.62	0.88	1.25	1.53	1.98	2.34	2.79	1.35
	NFS 050	1.13	0.80	1.13	1.60	1.96	2.53	2.99	3.58	1.50
	NFS 059	1.35	0.95	1.35	1.90	2.33	3.01	3.56	4.25	1.65
	NFS 077	1.77	1.25	1.77	2.50	3.06	3.95	4.67	5.59	2.00
	NFS 098	2.23	1.58	2.23	3.15	3.86	4.98	5.90	7.05	2.20
	NFS 12	2.83	2.00	2.83	4.00	4.90	6.33	7.48	8.95	2.50
	NFS 15	3.36	2.38	3.36	4.75	5.82	7.51	8.89	10.6	2.70
1/4" or 3/4"	NFS 25	5.66	4.00	5.66	8.00	9.80	12.7	15.0	17.9	3.50
	NFS 31	7.10	5.02	7.10	10.0	12.3	15.9	18.8	22.5	4.00
	NFS 39	8.83	6.25	8.83	12.5	15.3	19.8	23.4	27.9	4.50
	NFS 50	11.3	8.00	11.3	16.0	19.6	25.3	29.9	35.8	5.00
	NFS 62	14.1	10.0	14.1	20.0	24.5	31.6	37.4	44.7	5.50
3/4"	NFS 77	17.7	12.5	17.7	25.0	30.6	39.5	46.7	55.9	6.00
	NFS 93	21.2	15.0	21.2	30.0	36.7	47.4	56.1	67.0	6.90
3/4" or 1-1/4"	NFS 124	28.3	20.0	28.3	40.0	49.0	63.3	74.8	89.5	8.00
	NFS 155	35.3	25.0	35.3	50.0	61.2	79.0	93.5	112	9.00
	NFS 185	42.1	29.8	42.1	59.6	73.0	94.2	112	133	9.50
	NFS 195	44.6	31.5	44.6	63.0	77.2	100	118	141	10.0
1-1/4"	NFS 309	70.4	49.8	70.4	100	122	158	186	223	12.0
	NFS 496	113	80.0	113	160	196	253	299	358	15.0
2"	NFS 557	127	89.8	127	180	220	284	336	402	16.0
	NFS 620	141	100	141	200	245	316	374	447	17.0
	NFS 775	177	125	177	250	306	395	467	559	19.0
	NFS 977	223	158	223	315	386	498	590	705	21.0
	NFS 1130	258	182	258	365	447	577	683	816	22.5
	NFS 1320	301	213	301	425	521	673	796	951	24.5

### NFS Dimensions and Spray Angles

Pipe Size	Nozzle Number	Spray Angles Available	Dimensions (mm)			
			A	B	C	D
1/4"	NFS 012 To NFS 39	20° 30° 45° 60° 90° 120°	11.9			
	NFS 50 To NFS 62	20° 30° 45° 60° 90°	17.5			
	NFS 77	45°	19.1			
	NFS 25 To NFS 77	20° 30° 45° 60° 90° 120°	15.0			
3/4"	NFS 93*	120°	7.87			
	NFS 124 To NFS 155	20° 30° 45° 60° 90° 120°	31.8			
	NFS 185 To NFS 195	20° 30° 45° 60° 90° 120°	35.1			
	NFS 309	20° 30° 45° 60° 90° 120°	22.1 11.9			
	NFS 124 To NFS 496	20° 30° 45° 60° 90° 120°	50.8			
2"	NFS 557 To NFS 1320	20° 30° 45° 60° 90° 120°	31.8 20.1			
			69.9			
			76.2			

Flow Rate (l/min) =  $K \sqrt{\text{bar}}$

\*\*Available in straight (parallel) threads only, NPS 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.