

# N

## Fire Protection

### DESIGN FEATURES

- Simplicity of design
- One-piece/no internal parts
- Clog-resistant
- Three standard pipe sizes—1/2", 1", and 1-1/2"
- Male connection
- Factory Mutual, U.S. Coast Guard, and Lloyd's Register approved models

### SPRAY CHARACTERISTICS

- Two spray cones: an outer, wide angle cone and a narrower inner cone combine to give full cone effect

**Spray pattern:** Full Cone

**Spray angles:** 90° and 120° standard

**Flow rates:** 3.0 to 534 gpm



Nozzle with optional protective cover

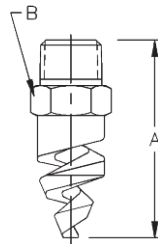
Use of blow-off covers requires a pressure of 25 PSI or higher



Full Cone 90°



Full Cone 120° (W)



N6 nozzles protect a propane storage tank from fire and explosion.



**N3-N5W: U.S. Coast Guard approved**  
**TF24-150° also available in Factory Mutual approved model (see page 20)**

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

### N Flow Rates and Dimensions

Full Cone, Medium 90° and Wide 120° (W) Spray Angles, 1/2" to 1 1/2" Pipe Sizes

Male Pipe Size	Nozzle Number	K Factor	GALLONS PER MINUTE @ PSI									Approx. (in.)		Approximate Dimensions (inches)		Wt. (oz.) Metal
			10 PSI	20 PSI	30 PSI	40 PSI	60 PSI	80 PSI	100 PSI	200 PSI	400 PSI	Orifice Dia.	Free Pass. Dia.	A	B	
1/2	N1	0.949	3.00	4.24	5.20	6.00	7.35	8.49	9.49	13.4	19.0	0.19	0.13	2.50	0.88	3.00
	N2	1.68	5.30	7.50	9.18	10.6	13.0	15.0	16.8	23.7	33.5	0.27	0.13			
	N3	2.61	8.25	11.7	14.3	16.5	20.2	23.3	26.1	36.9	52.2	0.34	0.13			
	N4	3.81	12.1	17.0	20.9	24.1	29.5	34.1	38.1	53.9	76.2	0.43	0.19			
	N5	5.22	16.5	23.3	28.6	33.0	40.4	46.7	52.2	73.8	104	0.53	0.19			
	N6	6.64	21.0	29.7	36.4	42.0	51.4	59.4	66.4	93.9	133	0.56	0.19			
1	N6	6.64	21.0	29.7	36.4	42.0	51.4	59.4	66.4	93.9	133	0.60	0.19	3.63	1.38	8.50
	N7	10.6	33.5	47.4	58.0	67.0	82.1	94.8	106	150	212	0.77	0.25			
1 1/2	N8	15.0	47.5	67.2	82.3	95.0	116	134	150	212	300	0.93	0.25	4.38	2.00	27.0
	N9	20.4	64.5	91.2	112	129	158	182	204	288	408	1.09	0.31			
	N10	26.7	84.5	120	146	169	207	239	267	378	534	1.29	0.31			

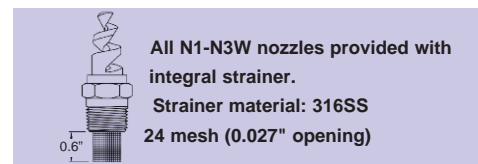
$$\text{Flow Rate (GPM)} = K \sqrt{\text{PSI}}$$

**Standard Nozzle Materials: Brass and 316 Stainless Steel**

Available in nickel aluminum bronze and titanium, plus other materials available on request.

**Standard Cover Materials: Brass for brass nozzles, 304 Stainless Steel for other nozzle materials**

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



All N1-N3W nozzles provided with integral strainer.  
 Strainer material: 316SS  
 24 mesh (0.027" opening)

SPECIAL PURPOSE

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