

CHAPTER 2

◆◆ Hollow Cone Nozzles



◆ ABOUT US

We Are Here to Help

• Welcome to SPADFLOW

facing the **Challenges** of new industries and emerging markets.

• Spray Technologies

with over **Thousands of Spray Nozzle Types** SPADFLOW has become Iran's leading producer.

• From Design to Installation

with **Skilled** engineers and project managers, SPADFLOW is providing consultancy and support services.

• Knowledge and Experience

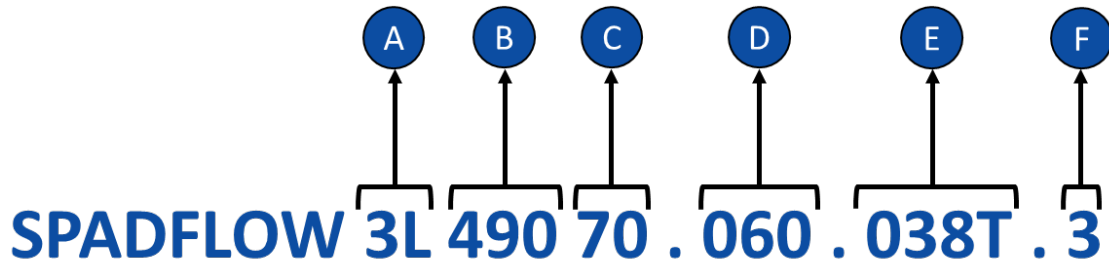
as an **Expert** on spray technology, SPADFLOW is at the forefront of production and innovation.





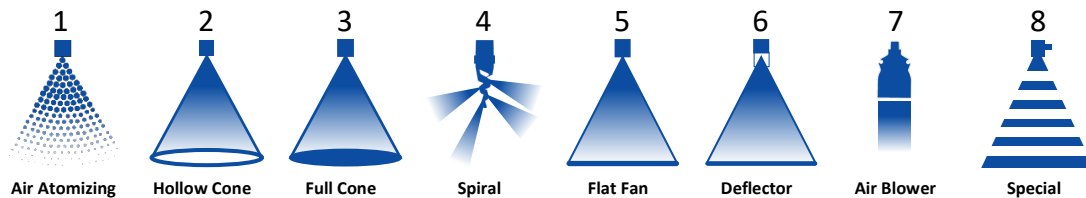
PRODUCT NUMBERS

Everything You Need to Know



A

Nozzle Type (Spray Pattern)



B

Nozzle Series

C

Flow Rate Rank

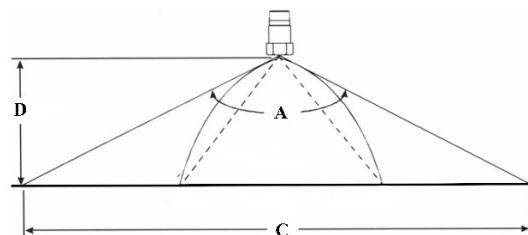
The flow rate rank is relative and depends on the respective nozzle type. The exact value is mentioned in tables on the product pages.

D

Spray Angle

Theoretical spray angle is mentioned in tables on the product pages. Actual spray angle depends on installation and alignment.

- A = Theoretical Spray Angle
- D = Spray Distance
- C = theoretical Spray Coverage



PRODUCT NUMBERS

Everything You Need to Know

E

Connection

1/8" to 4" connections. The exact specification is mentioned in tables on the product pages.

T = BSBT Thread Type Connection

P = BSPP Thread Type Connection

N = NPT Thread Type Connection

R = Retaining Nut

F

Material

Material	Code	Material	Code
Brass	1	Polyvinylchloride	PVC
AISI 304/304L Stainless Steel	2	Polypropylene	PP
AISI 316/316L Stainless Steel	3	Polyamide	PA
AISI 310 Stainless Steel	4	Polyvinylidene fluoride	PVDF
AISI 321 Stainless Steel	5	Polytetrafluorethylene	PTFE
AISI 420 Stainless Steel	6	Polyoxymethylene	POM
Tungsten Carbide	TN	Nitrile Butadiene Rubber	NBR
Phosphor Bronze	CuSn	Polylactic Acid	PLA
Copper	Cu	Acrylonitrile Butadiene Styrene	ABS
Titanium	TI	Nylon Polyamide	PA6
Aluminum	AL	Polycarbonate	PC

Ø B (Equivalent Bore Diameter)

Applies to elliptical discharge holes of flat fan nozzles. A cylindrical hole with a diameter A has the same surface area as the ellipse.

Ø E (Narrowest Free Cross Section)

Important Characteristics for determining the pre-filtration of a nozzle. Can be less than a due to several swirl ducts.

Conversion Formula: $K \text{ factor} \times \sqrt{P(\text{bar})} = Q (\text{l/min})$

All flow rate data in this catalogue is based on measurements with water,

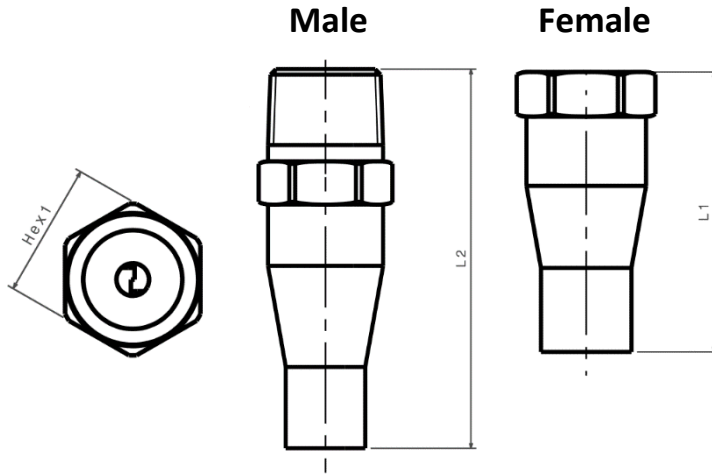
Spray angle (α)	Code	Connection Size [inch]	Ø B [mm]	Ø E [mm]	Flow rate (Q) [l/min]						
					Pressure (P) [bar]						
					0.5	1.0	2.0	3.0	5.0	7.0	10.0
45°	3L 490 40 . 045	1/8"	1.25	1.25	0.57	0.76	1.00	1.18	1.44	1.65	1.90
	3L 490 60 . 045	1/4"	2.00	2.00	1.81	2.39	3.15	3.70	4.54	5.20	6.00
	3L 490 70 . 045	3/8"	2.65	2.65	3.22	4.24	5.60	6.59	8.08	9.24	10.66
	3L 490 78 . 045	1/2"	3.45	3.45	5.17	6.82	9.00	10.58	12.98	14.85	17.12
60°	3L 490 40 . 060	1/8"	1.15	1.15	0.57	0.76	1.00	1.18	1.44	1.65	1.90
	3L 490 80 . 060	3/8"	3.70	3.70	5.74	7.58	10.00	11.76	14.43	16.51	19.04
	3L 490 88 . 060	1/2"	4.65	4.65	9.19	12.13	16.00	18.82	23.08	26.41	30.46
	3L 490 96 . 060	3/4"	5.80	5.80	14.36	18.95	25.00	29.40	36.07	41.26	47.59
	3L 491 08 . 060	1"	8.15	8.15	28.72	37.89	50.00	58.80	72.14	82.53	95.18

SPADFLOW spray nozzles are manufactured with the highest precision and undergo permanent quality checks. However, production-related tolerances can affect the spray angle, flow rate, droplet size and droplet distribution.

SPADFLOW 2B NCJ

High Flow Hollow-Cone Nozzle

Webpage
+ STP



G1	Thread Type			Dimensions [mm]			Weight
	BSPT	BSPP	NPT	L ₁	Hex1	L ₂	
3/4"	034T	034P	034N	82.6	28.4	82.6	340 gr
1"	100T	100P	100N	88.9	35.1	88.9	450 gr
1 1/4"	114T	114P	114N	102	44.5	102	570 gr
1 1/2"	112T	112P	112N	127	50.8	127	1020 gr
2"	200T	200P	200N	152	63.5	152	1130 gr
2 1/2"	212T	212P	212N	194	76.2	178	2610 gr
3"	300T	300P	300N	203	88.9	203	2840 gr
4"	400T	400P	400N	278	114	251	6800 gr
6"	600T	600P	600N	381	168	343	15900 gr

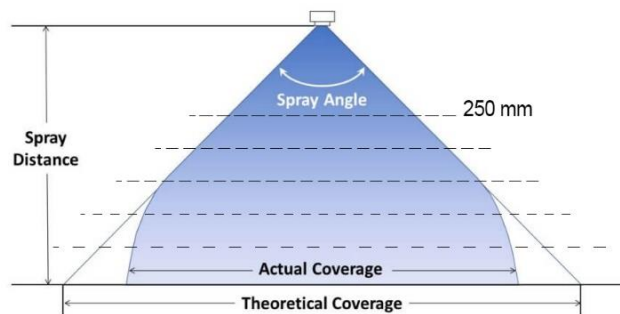
Properties:

- Two-Piece Construction
- Internal Vane
- Coarse Spray
- Flanged Connection is Available
- High Velocity

Material*	Code
Brass	1
S.S.304	2
S.S.316	3

* Different materials are available upon request

α	Spray coverage
	@ 250 mm
15°	60 mm
20°	90 mm
30°	130 mm





SPADFLOW 2B NCJ

High Flow Hollow-Cone Nozzle

Webpage
+ STP



Spray angle α	Code	Connection [inch]	B \varnothing [mm]	Flow rate [l/min]							
				P [bar]							
				0.5	0.7	1.0 <i>K</i> factor	1.5	2.0	3.0	5.0	7.0
15°	2B NCJ 06 . 015	3/4"	7.52	23.1	27.0	32.0	38.7	44.3	53.6	68.1	79.8
	2B NCJ 12 . 015	1"	10.3	46.2	54.1	64.0	77.4	88.6	107	136	160
	2B NCJ 18 . 015	1 1/4"	12.3	69.3	81.1	95.9	116	133	161	204	239
	2B NCJ 26 . 015	1 1/2"	15.1	100	117	139	168	192	232	295	346
	2B NCJ 48 . 015	2"	20.2	185	216	256	310	354	429	545	638
	2B NCJ 72 . 015	2 1/2"	24.6	277	325	384	464	532	643	818	958
	2B NCJ 05 . 015	3"	29.5	404	473	560	677	775	938	1190	1400
	2B NCJ 90 . 015	4"	40.5	731	856	1010	1230	1400	1700	2160	2530
2B NCJ 50 . 015	6"	54.0	1380	1580	1860	2260	2580	3130	3980	4660	
20°	2B NCJ 06 . 020	3/4"	7.52	23.1	27.0	32.0	38.7	44.3	53.6	68.1	79.8
	2B NCJ 12 . 020	1"	10.3	46.2	54.1	64.0	77.4	88.6	107	136	160
	2B NCJ 18 . 020	1 1/4"	12.3	69.3	81.1	95.9	116	133	161	204	239
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2B NCJ 50 . 020	6"	54.0	1380	1580	1860	2260	2580	3130	3980	4660	
30°	2B NCJ 06 . 030	3/4"	7.52	23.1	27.0	32.0	38.7	44.3	53.6	68.1	79.8
	2B NCJ 12 . 030	1"	10.3	46.2	54.1	64.0	77.4	88.6	107	136	160
	2B NCJ 18 . 030	1 1/4"	12.3	69.3	81.1	95.9	116	133	161	204	239
	2B NCJ 26 . 030	1 1/2"	15.1	100	117	139	168	192	232	295	346
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