

## CHAPTER 3

# ◆◆ Full Cone Nozzles



# ◆ ABOUT US

We Are Here to Help

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## • 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

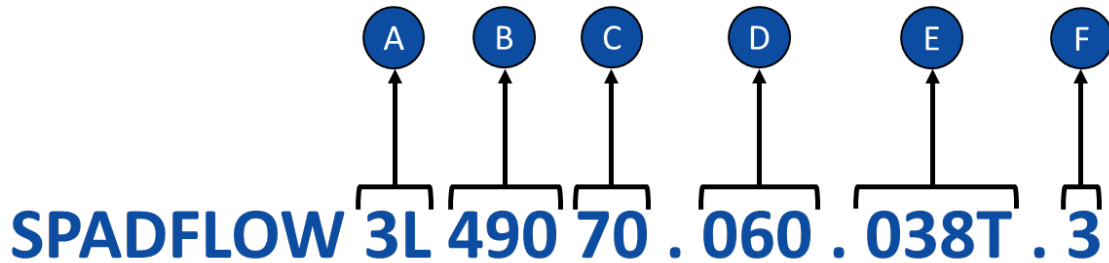
as an **Expert** on spray technology, SPADFLOW is at the forefront of production and innovation.





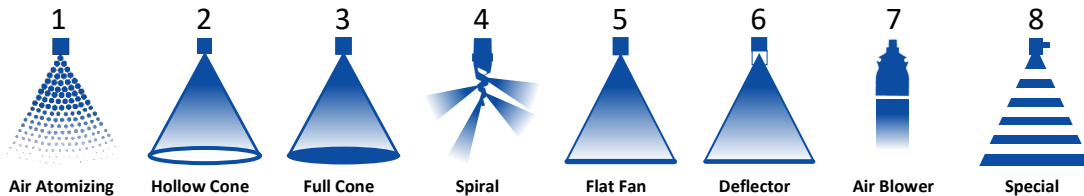
# PRODUCT NUMBERS

## Everything You Need to Know



### A

#### Nozzle Type (Spray Pattern)



### B

#### Nozzle Series

### C

#### Flow Rate Rank

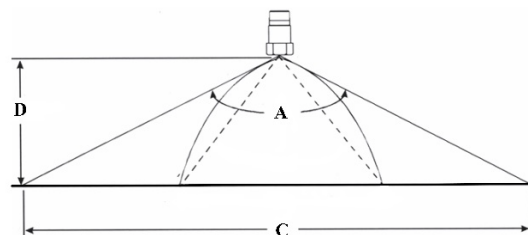
The flow rate rank is relative and depends on the respective nozzle type. The exact value is mentioned in tables on the product pages.

### 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

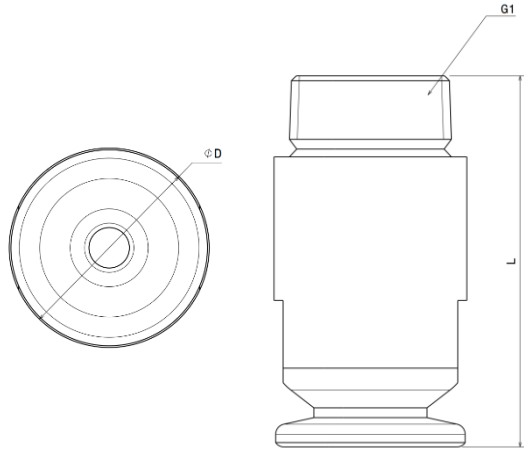
SPADFLOW spray nozzles are manufactured with the highest precision and undergo permanent quality checks. However, production-related tolerances can affect the spray angle, flow rate, droplet size and droplet distribution.



# SPADFLOW 3B MP

## High Flow Full-Cone Nozzle

Webpage  
+ STP



### Properties:

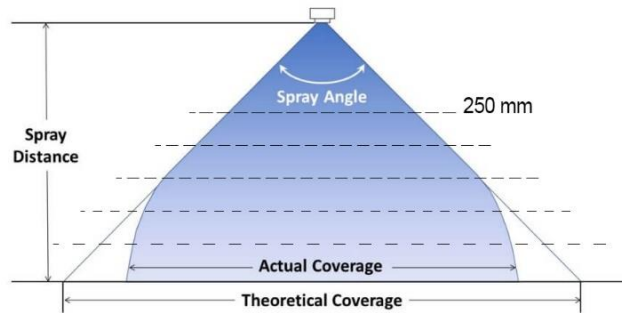
- One-Piece Construction
- Internal Vane
- Large Open Orifice

G1	Thread Type		
	BSPT	BSPP	NPT
2"	200T	200P	200N
2 1/2"	212T	212P	212N
3"	300T	300P	300N
4"	400T	400P	400N

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

\* Different materials are available upon request

$\alpha$	Spray coverage @ 250 mm
120°	850 mm



Spray angle ( $\alpha$ )	Code	Connection** [inch]	Flow rate [l/min]								Dimension [mm]		Weight
			P [bar]								L	D	
			0.2	0.3	0.5	0.7	1 <i>K factor</i>	2	3	5			
120°	3B MP 750 . 120	2"	94.8	115	146	171	<b>202</b>	280	339	430	159	66.8	1.59 Kg
	3B MP 812 . 120	2"	104	126	160	187	<b>221</b>	306	370	471	159	66.8	1.59 Kg
	3B MP 875 . 120	2"	129	155	197	231	<b>273</b>	378	458	582	159	66.8	1.59 Kg
	3B MP 937 . 120	2"	144	174	221	259	<b>306</b>	424	513	652	165	82.6	1.70 Kg
	3B MP 1000 . 120	2" - 2 1/2"	168	203	259	303	<b>358</b>	496	600	763	171	82.6	1.70 Kg
	3B MP 1125 . 120	2" - 2 1/2"	206	249	317	371	<b>439</b>	608	736	935	168	82.6	1.70 Kg
	3B MP 1250 . 120	2 1/2"	247	299	381	446	<b>527</b>	730	883	1120	171	82.6	2.04 Kg
	3B MP 1375 . 120	2 1/2"	297	359	456	535	<b>632</b>	875	1060	1350	178	82.6	2.04 Kg
	3B MP 1500 . 120	2 1/2" - 3"	363	440	559	655	<b>774</b>	1070	1230	1650	181	82.6	2.04 Kg
	3B MP 1625 . 120	3"	428	517	658	770	<b>911</b>	1260	1530	1940	229	102	2.84 Kg
	3B MP 1750 . 120	3" - 4"	488	591	751	880	<b>1040</b>	1440	1740	2220	229	102	2.84 Kg
	3B MP 1875 . 120	4"	549	664	845	989	<b>1,170</b>	1,620	1,960	2,490	248	121	3.29 Kg
	3B MP 2000 . 120	4"	643	778	989	1160	<b>1370</b>	1900	2300	2920	251	121	3.29 Kg
	3B MP 2125 . 120	4"	718	869	1100	1290	<b>1530</b>	2120	2560	3260	251	121	3.29 Kg
3B MP 2250 . 120	4"	779	943	1200	1,400	<b>1,660</b>	2,300	2,780	3,540	248	121	3.63 Kg	