Dongguan Changyuan Spraying Technology Co.,Ltd
Add: Xiabian Industrial Park, Chang'an Town, Dongguan City, Guangdong Province. China 523877
Tel: +86 769 81558030 Fax: +86 769 81558044 Web.: ccnozzle.com

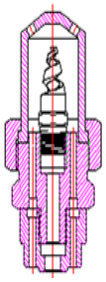
CYCO's Spray Nozzles & Lances for SCR and SNCR NOx Control

Currently, the treatment for flue gas denitrification (DeNOx) used generally are two-fluid spray nozzles / lances, thus the reagent is atomized with compressed air and micro particles droplets are formed to reduce the emission of nitrogen oxides in flue gas.
Also, there are other occasions use single fluid nozzles.

Main Spray Nozzles and Lances： (Two Fluid)

1. CDE Two-Fluid Spiral Nozzle



Features

* Application: dust removing, desulfurization and denitrification of power plant; other chemical plants; cement plant; dust control and environmental projects, etc.
* Use steam or air as the second fluid.
* Three-stage atomization can achieve the best atomization performance.
* High-efficiency design reduces the consumption of compressed air.
* With internal spiral nozzle for the second-stage atomization, channel with large core diameter can effectively prevent clogging.

* Spray pattern: hollow cone, full cone, flat fan
* Spray angle: 20°, 60°, 90° (Other degree can also be provided if you require.)
* Flow rate: 2.0 -- 80L / min
* Material: 303SS, 316SS, 316L, 310SS, 2205, PVDF, Cobalt alloy 6, Hastelloy, etc. (Other materials are also available as your requirement.)

Technical Data Sheet

CDE Spray gun setting, spiral nozzle tip and size

管径 Pipe diameter	喷雾角 Angie	喷嘴号 Model	喷雾角 Angie	喷雾类型 Spray pattern	最大颗粒尺寸mm Droplet size	额定螺旋嘴部编号 Spiral nozzle model	尺寸mm Dimension A	B	C	D	W.T. 重量 (kg)
1"	14	DE101	20°	窄角圆形 Narrow round	3.30	14	148	50.8	50.8	64	0.64
		DE 308	90°	广角圆形 Wide round	2.69						
		DE310	60°		2.69						
		DE402	90°	扁平扇形 Flat fan	4.22						
		DE404	60°		4.22						
	20	DE103	20°	窄角圆形 Narrow round	6.60	20	148	50.8	50.8	50.8	0.64
		DE307	90°		3.48						
		DE309	60°	广角圆形 Wide round	3.48						
		DE401	90°	扁平扇形 Flat fan	5.21						
		DE403	60°		5.21						
1 1/2"	28	DE2100	20°	窄角圆形 Narrow round	9.27	28	229	50.8	55.6	113	1.5
		DE2310	90°		4.65						
		DE2303	60°	广角圆形 Wide round	4.65						

Narrow angle,wide angle,flat fan,1″–1½″Bsp or NPT

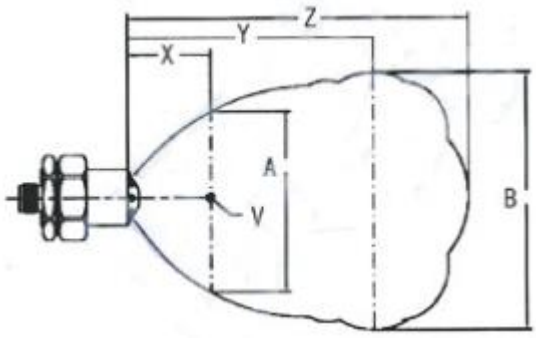
BSP NPT	流率 Flow rate	1.0巴空气压力 1.0 bar(air)			2.0巴空气压力 2.0 bar(air)			3.0巴空气压力 3.0 bar(air)			4.0巴空气压力 4.0 bar(air)			5.0巴空气压力 5.0 bar(air)			6.0巴空气压力 6.0 bar(air)			7.0巴空气压力 7.0 bar(air)		
		液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air	液体 l/min Liquid	液体 巴 Liquid Bar	空气 Nm³/h Air
1"	14	2	0.9	25.0	2	1.9	45.0	2	2.8	60.2	2	3.7	86.3	2	4.6	105	2	5.7	137	2	6.4	149
		3	0.9	20.2	3	1.9	39.0	3	2.8	56.8	3	3.8	79.8	3	4.7	97.9	3	5.7	136	3	6.5	146
		4	1.0	17.3	4	2.0	29.1	4	2.9	50.8	4	3.8	73	4	4.8	88.9	4	5.9	123	4	6.5	134
					5	2.0	26.8	5	3.0	43.8	5	3.9	64.8	5	4.8	82.6	5	5.9	110	5	6.6	117
					6	2.1	24.4	6	3.0	41.2	6	3.9	57.9	6	4.9	78.3	6	6.1	100	6	6.7	112
					7	2.1	21.9	7	3.0	38.5	7	4.0	53.2	7	5.0	69.9	7	6.2	94.9	7	6.8	107
								8	3.1	35.4	8	4.1	49.9	8	5.0	66.7	8	6.2	88.9	8	6.9	100
											9	4.1	47.0	9	5.1	64.1	9	6.3	79.8	9	7.0	93.2
											10	4.2	45.3	10	5.1	60.5	10	6.4	75.2	10	7.1	86.0
											12	4.4	39.3	12	5.3	53.2	11	6.6	69.6	11	7.2	83.6
																	12	6.6	68.4	12	7.3	80.3
	20	4	0.2	34.9	4	1.5	64.4	4	2.4	91.7	4	3.2	117	4	4.0	140	4	4.8	161	4	5.6	180
		8	0.8	24.3	8	1.7	45.9	8	2.6	68.1	8	3.5	91.0	8	4.4	114	8	5.2	139	8	6.0	163
					11	1.9	35.8	11	2.9	56.3	11	3.8	78.0	11	4.6	101	11	5.3	125	11	6.0	151
					15	2.1	26.8	15	3.0	45.8	15	3.9	65.2	15	4.8	85.2	15	5.6	105	15	6.4	126
					19	2.2	23.6	19	3.1	39.0	19	4.1	55.9	19	5.0	74.4	19	5.8	94.3	19	6.7	116
					23	2.4	21.8	23	3.3	36.7	23	4.2	51.6	23	5.1	67.2	23	5.9	82.8	23	6.8	96.7
								26	3.5	31.8	26	4.4	46.9	26	5.2	61.6	26	6.1	76.1	26	6.9	90.2
											30	4.5	42.9	30	5.4	55.6	30	6.2	70.4	30	7.1	87.4
											34	4.7	37.0	34	5.6	50.6	34	6.5	62.7	34	7.3	73.2
											38	5.0	32.4	38	5.9	47.2	38	6.7	57.8	38	7.5	64.2
1½"	28							40	3.1	76.3	40	4.0	107	40	5.0	142	40	6.0	183	40	7.0	229
								45	3.2	69.0	45	4.2	97.4	45	5.2	130	45	6.2	167	45	7.3	208
								50	3.3	61.8	50	4.2	88.4	50	5.2	118	50	6.3	152	50	7.3	189
								55	3.4	55.5	55	4.3	80.7	55	5.3	109	55	6.3	141	55	7.4	175
								60	3.5	49.1	60	4.4	73.2	60	5.4	100	60	6.4	130	60	7.5	162
								65	3.6	43.1	65	4.6	66.3	65	5.6	92.3	65	6.6	121	65	7.6	152
								70	3.8	37.5	70	4.8	60.2	70	5.8	85.8	70	6.8	114	70	7.9	145
								75	4.0	32.1	75	5.0	54.6	75	6.1	80.2	75	7.1	109	75	8.2	141
								80	4.2	27.1	80	5.2	49.8	80	6.2	76.0	80	7.2	106	80	8.2	139

2. CFM Target Nail Nozzle

Features

* The strict control of droplet size and spray coverage allows this kind of nozzle to ideally modulate the fumes of gases in furnace, cooling tower, flue, dryer, etc.
* Multi-stage atomization process produces extremely tiny droplets using as little air as possible.
* A single nozzle is capable of ejecting larger flow of water, reducing the total number of nozzles required.
* Higher flow rate ensures stable air pressure.
* Material: 303SS, 316SS, 310SS, Hastelloy, etc.
* Large free and clear passage, more flexible requirements for water quality.

The coverage of the target nail nozzle



Technical Data Sheet

CF M5 – 55°								
空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围 (m) Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.76	2.32	7.57	1.22	0.66	4.88	1.47	6.4	31.5
	3.02	15.14	1.22	0.76	4.88	1.52	6.1	30.5
	3.96	22.71	1.22	0.86	4.88	1.63	5.18	29.6
4.41	3.37	7.57	1.22	0.56	4.88	1.12	6.71	36.2
	4.13	15.14	1.22	0.61	4.88	1.22	6.4	35.4
	5.12	22.71	1.22	0.71	4.88	1.42	6.1	34.7

CF M5 – 55°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围（m） Coverage					喷雾速度 (m/s) Speed
4.83	3.91	7.57	1.22	0.56	4.88	1.12	6.86	39.6
	4.72	15.14	1.22	0.61	4.88	1.22	6.71	38.2
	5.67	22.71	1.22	0.66	4.88	1.32	6.4	37.6
5.52	4.54	7.57	1.22	0.56	4.88	1.12	7.32	39.6
	5.39	15.14	1.22	0.61	4.88	1.17	7.01	39.3
	6.28	22.71	1.22	0.66	4.88	1.32	6.71	38.7

CFM5 – 20°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围（m） Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.76	2.32	7.57	1.22	0.36	4.88	1.22	10.92	31.5
	3.02	15.14	1.22	0.46	4.88	0.91	10.92	30.5
	3.96	22.71	1.22	0.61	4.88	0.76	10.92	29.6
4.41	3.37	7.57	1.22	0.41	4.88	1.07	11.43	36.2
	4.13	15.14	1.22	0.46	4.88	1.02	11.43	35.4
	5.12	22.71	1.22	0.48	4.88	0.99	11.43	34.7
4.83	3.91	7.57	1.22	0.33	4.88	0.91	12.92	39.6
	4.72	15.14	1.22	0.43	4.88	1.12	12.92	38.2
	5.67	22.71	1.22	0.43	4.88	0.89	12.92	37.6
5.52	4.54	7.57	1.22	0.38	4.88	0.99	12.7	39.6
	5.39	15.14	1.22	0.46	4.88	1.12	12.7	39.3
	6.28	22.71	1.22	0.41	4.88	1.07	12.7	38.7

CFM10 – 55°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围（m） Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.76	2.38	15.14	1.22	1.17	3.35	2.08	5.79	25
	3	30.28	1.22	1.27	3.35	3.15	5.18	22.3
	3.8	45.42	1.22	1.47	3.35	3.96	4.88	20.4
4.41	3.4	15.14	1.22	0.91	3.35	1.83	6.4	27.6
	4.14	30.28	1.22	1.02	3.35	1.88	6.1	25.5
	5.01	45.42	1.22	1.12	3.35	1.93	5.99	23.9
4.83	3.86	15.14	1.22	0.61	3.35	1.22	7.32	33
	4.77	30.28	1.22	0.81	3.35	1.32	7.01	29.5
	5.68	45.42	1.22	0.86	3.35	1.42	6.71	27.9
5.52	4.46	15.14	1.22	0.61	3.35	1.02	7.62	39.1
	5.46	30.28	1.22	0.76	3.35	1.22	7.32	32.2
	6.27	45.42	1.22	0.81	3.35	1.32	7.26	30.2

CFM10 – 20°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围 (m) Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.76	2.62	15.1	1.22	0.46	3.35	1.22	4.88	31.5
	3.24	30.3	1.22	0.51	3.35	1.22	5.49	30.5
	4	45.4		0.66		1.12	6.1	29.6
4.41	3.86	15.1		0.46	3.35	1.17	4.88	36.2
	4.48	30.6	1.22	0.46	3.35	1.17	5.49	35.4
	5.31	45.4	1.22	0.51	3.35	1.12	6.1	34.7
4.83	4.48	15.1	1.22	0.46	3.35	1.22	5.18	39.6
	5.17	30.3	1.22	0.51	3.35	1.12	5.79	38.2
	6	45.4	1.22	0.56	3.35	1.22	6.4	37.6
5.52	5.1	15.1	1.22	0.41	3.35	1.22	6.1	39.6
	2.79	30.3	1.22	0.51	3.35	1.12	6.71	39.3
	6.59	45.4	1.22	0.51	3.35	1.12	7.32	38.7

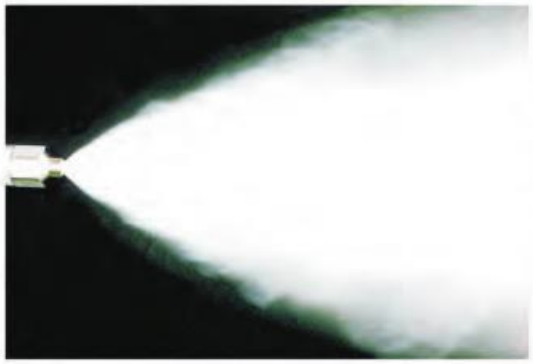
CFM25 – 55°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围 (m) Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.07	2.63	56.78	1.22	1.63	3.66	3.66	5.49	24.5
	2.9	68.14	1.22	1.68	3.66	3.76	5.33	23.3
	3.25	79.49	1.22	1.73	3.66	3.81	5.18	22.3
2.76	3.23	68.14	1.22	1.22	3.66	3.05	5.79	28
	3.54	83.28	1.22	1.27	3.66	3.35	5.69	26.7
	4.01	83.28	1.22	1.47	3.66	3.66	5.59	25.2
	4.4	91.64	1.22	1.63	3.66	3.76	5.49	24.1
4.14	4.43	56.78	1.22	1.02	3.66	2.13	6.4	37.1
	5.03	75.71	1.22	1.22	3.66	2.79	5.79	33.5
	5.7	94.64	1.22	1.32	3.66	3.05	5.69	30.9
	6.45	113.56	1.22	1.42	3.66	3.3	5.64	28.8

CFM25 – 20°

空气压力 (bar) Air pressure	液体压力 (bar) Liquid pressure	液体流量 (L/min) Flow rate	喷雾范围 (m) Coverage					喷雾速度 (m/s) Speed
			X	A	Y	B	Z	U
2.07	2.55	56.8	1.22	0.66	3.66	1.22	6.4	31.5
	2.83	68.1	1.22	0.66	3.66	1.22	6.4	30.5
	3.15	79.5	1.22	0.71	3.66	1.52	7.32	29.6
2.76	3.21	56.8	1.22	0.61	3.66	1.22	6.71	36.2
	3.48	68.1	1.22	0.66	3.66	1.22	6.71	35.4
	3.83	79.5	1.22	0.66	3.66	1.42	6.71	34.7
4.14	4.39	56.8	1.22	0.56	3.66	1.02	7.32	39.6
	4.76	68.1	1.22	0.61	3.66	1.02	7.32	38.2
	5.10	79.5	1.22	0.61	3.66	1.02	7.32	37.6

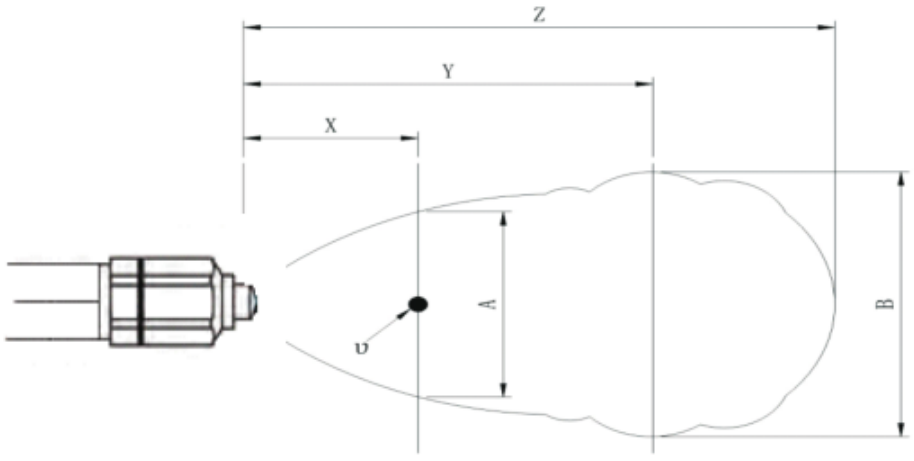
3. CSIM Blade Type Nozzle



Features

* The average particle diameter is 50um at the spray amount of 17L/min and air-water ratio of 150.
* Spray angle: 20°, 60°
* Developed based on new concept, with an excellent micronization ability.
* Low ratio of air and water, can produce large volume spray with less compressed air.
* Simple structure, easy for maintenance.
* Material: 303SS, 316SS, 310SS, Hastelloy, etc.

The coverage and spray pattern



Technical Data Sheet

型号 Model	水压（bar） Liquid pressure	气压（bar） Air pressure	性能数据（m）Performance data				
			X	A	Y	B	Z
20度	0.25 ~ 0.35	0.3	3	1.1	5	1.5	13
	0.35 ~ 0.45	0.4	3	1.2	5	1.6	14
	0.45 ~ 0.55	0.5	3	1.3	5	1.7	14
60度	0.25 ~ 0.35	0.3	3	1.5	5	2	11
	0.35 ~ 0.45	0.4	3	1.4	5	2	12
	0.45 ~ 0.55	0.5	3	1	5	1.3	12

4. CSMM Back End Atomizing Nozzle

Features

* Simple structure, non-clogging design, easy for maintenance.
* Uniform water distribution.
* Less air consumption.
* Wide spray coverage.
* Small average particle radius, small particle radius difference.
* Low air-water ratio produces fine particles, save air consumption.
* Long service life due to optimized design for gas-water mixing structure
* Material: 303SS, 316SS, 310SS, Hastelloy, etc.

Spray effect and technical data

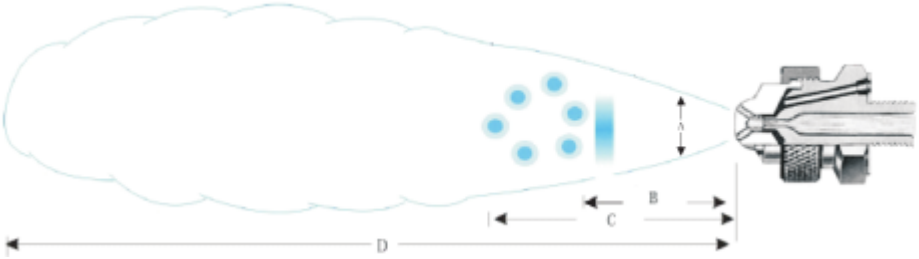
气压（bar） Air pressure	水压（bar） Liquid pressure	D（m）
3.3	3.3	5
4.8	4.6	5.5
2.9	2.5	4.5
2.2	0.18	4

5. FIM Micro Mist Spray Nozzle (Air Atomizing Nozzle)

Features

* Spray pattern: full cone or flat fan
* Less spray volume, the average particle size within 50um, the biggest particle size is 120um.
* Low air-water ratio, low flow rate.
* Advanced and mini design.
* Uniform distribution of particle size provides excellent superior guarantee for uniform evaporation and absorption of liquids.
* Material: 303SS, 316SS, 310SS, Hastelloy, etc.

Spray effect and technical data :

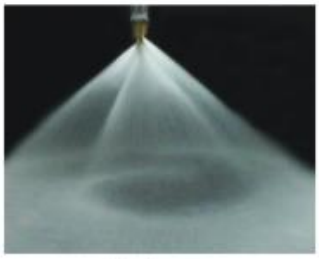


FIM25-Y Spray Jet Size					
	Air Pressure (bar)	Fluid Pressure (bar)	Spray Angle (°)	B (cm)	D (cm)
Round Spray	1.5	0.7	12	48	4
	2.5	1.5	13	51	4.3
	3	2	13	53	4.6
	3.4	3	14	56	4.9
	4.2	4	15	60	5.3

FIM15-S Spray Jet Size						
	Air Pressure (bar)	Fluid Pressure (bar)	Spray Angle (°)	B (cm)	C (cm)	D (cm)
Round Spray	1.1	0.7	25	36	46	2.6
	2.1	1.5	36	48	66	3
	2.8	2	38	53	76	3.2
	3.5	3	47	61	86	3.4
	6	4	56	74	94	4

Other Spray Nozzles (Single Fluid)

1. Spiral Nozzle



Full cone

Hollow cone

Features

Spray Pattern: full cone / hollow cone
Spray Angle : 60 °, 90 °, 120 °, 150 °, 170 °
Flow rate range: 5.5L/min-4140L/min under 3 bar pressure
Thread size: 1/4”-4”
Material: 316SS,2205SS,2507SS, PP, PTFE,PVDF, Hastelloy, Cobalt Alloy, 254SMO

Technical Data Sheet

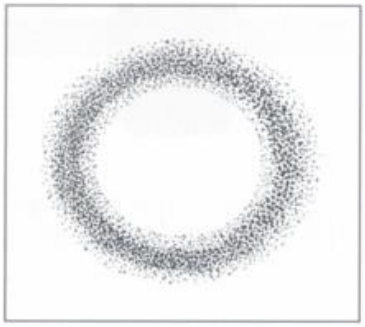
pipe connetion NPT or BSPT (out)	Spray angle (0. 7bar)					Capacity Size	orifice size (mm)	Diameter of nozzle without block(mm)	Capacity (L/min)				
	60°	90°	120°	150°	170°				0.7bar	1.5bar	3bar	7bar	25bar**
1/4	●	●	●			07	2.4	2.4	2.6	3.9	5.5	8.4	16
	●	●	●	●	●	13	3.2	3.2	4.9	7.3	10.3	15.7	30
	●	●	●	●	●	20	4.0	3.2	7.6	11.2	15.8	24	46
3/8	●					07	2.4	2.4	2.6	3.9	5.5	8.4	16
	●					13	3.2	3.2	4.9	7.3	10.3	15.7	30
	●					20	4.0	3.2	7.6	11.2	15.8	24	46
	●	●	●	●	●	30	4.8	3.2	11.4	16.7	24	36	68
	●	●	●	●	●	40	5.6	3.2	15.1	22	32	48	91
	●	●	●	●	●	53	6.4	3.2	20	30	42	64	121
	●	●	●	●	●	82	7.9	3.2	31	46	65	99	187
½	●	●	●	●	●	120	9.5	4.8	45	67	95	145	270
	●	●	●	●	●	164	11.1	4.8	62	92	129	198	370
3/4	●	●	●	●	●	210	12.7	4.8	80	117	166	255	480
1	●	●	●	●	●	340	15.9	6.4	130	190	270	410	775
	●	●	●	●	●	470	19.1	6.4	179	260	370	565	1070
1-1/2	●	●	●	●	●	640	22.2	7.9	245	355	505	770	1460
	●	●	●	●	●	820	25.4	7.9	310	455	645	990	1870
	●	●	●	●	●	960	28.6	7.9	365	535	755	1160	2190
2	●	●	●	●	●	1400	34.9	11.1	535	780	1105	1690	3190
	●	●	●	●	●	1780	38.1	11.1	680	995	1405	2150	4060
3	●	●	●			2560	44.5	14.3	980	1430	2020	3090	5830
	●	●	●			3360	50.8	14.3	1280	1880	2650	4050	7660
4	●	●	●			5250	63.5	15.9	2000	2930	4140	6330	11960

Adjustable connection:

Adjustable connection

Nozzle Inlet Conn.	Nozzle length (mm)	Spray angle
1/4	53.9	60° ,150° and 170°
1/4	47.6	90° and 120°
3/8	60.3	60° ,150° and 170°
3/8	47.6	90° and 120°
½	79.4	60° ,150° and 170°
½	63.5	90° and 120°
3/4	87.3	60° ,150° and 170°
3/4	69.9	90° and 120°
1	116	60° ,150° and 170°
1	92.1	90° and 120°
1 1/2	171	60° ,150° and 170°
1 1/2	111	90° and 120°
2	175	60° and 170°
3	302	60°
3	203	90° and 120°
4	229	60°, 90° and 120°

2. Large Flow Flanged Silicone Carbide Spray Nozzle



Features

SPJT nozzle spray pattern: hollow cone

Spray angle: 60-180 degree (2 inch), 60 -120 degree (3 inch and 4 inch)

Flow rate: 535-2000 L/ min at 0.7 bar

Inlet size: 2, 3, 4 inch

Material: silicone carbide

Technical Data Sheet

Nozzle Inlet Conn.	Spray angle (0. 7bar)				Capacity Size	Rated Orifice Dia. (mm)	Diameter of nozzle without block(mm)	Capacity (L/m)				
	60°	90°	120°	180°				0.7bar	1.5bar	3bar	7bar	25bar
2 inch Flange	●	●	●	●	1400	34.9	11.1	535	780	1105	1690	3190
	●	●	●	●	1780	38.1	11.1	680	995	1405	2150	4060
3 inch Flange	●	●	●		2560	44.5	14.3	980	1430	2020	3090	5830
	●	●	●		3360	50.8	14.3	1280	1880	2650	4050	7660
4 inch Flange	●	●	●		5250	63.5	15.9	2000	2930	4140	6330	11960

3. Large Flow AASR / AAS Catamaran Casting Style Nozzle

AASR

Features

Spray pattern: hollow cone

Spray angle: 45 - 52 degree (narrow)

60 - 86 degree (standard)

Flow rate: 90-2012 L/ min

Inlet size: 1-1/4 ~ 4 inch

Spray tips material: can be carborundum or boron carbide

AAS

Features

Spray pattern: hollow cone

Drop size: medium to large, uniform distribution

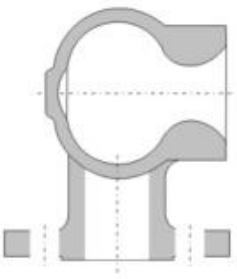
Inlet size: 1-1/4, 2, 3 inch

Flow rate: 94-1320 L / min

Technical Data Sheet

Nozzle Inlet Conn.	Nozzle Type			Capacity Size	Inlet Dia. Nom. Size (mm)	Rated Orifice Dia. (mm)	Capacity (L/min)										Spray angle		
	inner connector AASR	Flange conn. AASB	Flange conn. AAS				0.2 bar	0.5 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	0.5 bar	1.5 bar	4 bar
1–1/4	●			10–45°	21.4	13.1	24	39	54	67	77	94	109	122	133	144	45°	49°	52°
	●			12–45°		14.3	29	46	65	80	92	113	131	146	160	173	45°	49°	51°
	●			14–45°		16.9	34	54	76	93	108	132	153	171	187	200	45°	48°	51°
	●			16–45°		19.1	39	62	87	107	123	151	174	195	215	230	45°	48°	50°
	●			20–45°		22.2	49	77	109	133	154	189	220	245	270	290	45°	47°	49°
2	●	●		30–45°	36.5	23.8	73	116	163	200	230	285	325	365	400	430	45°	49°	52°
	●	●		35–45°		27.0	85	135	191	235	270	330	380	425	465	500	45°	49°	51°
	●	●		40–45°		30.2	97	154	220	265	310	375	435	490	530	580	45°	48°	51°
	●	●		45–45°		32.1	110	173	245	300	345	425	490	550	600	650	45°	48°	50°
	●	●		50–45°		34.9	122	193	270	335	385	470	540	610	670	720	45°	47°	49°
	●	●		55–45°		36.9	134	210	300	365	425	520	600	670	730	790	45°	47°	49°
3	●	●	●	70	57.2	34.9	171	270	380	465	540	660	760	850	930	1010	65°	66°	69°
	●	●	●	85		40.1	205	325	465	570	650	800	930	1040	1130	1230	67°	68°	71°
	●	●	●	100		44.5	245	385	540	670	770	940	1090	1220	1330	1440	69°	72°	74°
	●	●	●	120		52.4	290	460	650	800	920	1130	1310	1460	1600	1730	71°	73°	77°
	●	●	●	140		58.7	340	540	760	930	1080	1320	1530	1710	1870	2020	73°	75°	80°
	●	●	●	55–45°		34.9	171	270	380	465	540	660	760	850	930	1010	45°	49°	52°
	●	●	●	85–45°		40.1	205	325	465	570	650	800	930	1040	1130	1230	45°	49°	51°
	●	●	●	100–45°		44.5	245	385	540	670	770	940	1090	1220	1330	1440	45°	48°	51°
	●	●	●	120–45°		51.2	290	460	650	800	920	1130	1310	1460	1600	1730	45°	48°	50°
	●	●	●	140–45°		58.7	340	540	760	930	1080	1320	1530	1710	1870	2020	45°	47°	49°
4	●	●	●	150	79.4	50.8	365	580	820	1000	1160	1420	1630	1830	2000	2160	66°	67°	70°
	●	●	●	175		59.1	425	670	950	1170	1350	1650	1910	2130	2340	2520	68°	70°	71°
	●	●	●	200		68.3	485	770	1090	1330	1540	1890	2180	2440	2670	2880	70°	72°	74°
	●	●	●	225		74.6	550	870	1230	1500	1730	2120	2450	2740	3000	3240	72°	74°	77°
	●	●	●	250		82.6	610	960	1360	1670	1930	2360	2720	3050	3340	3600	74°	76°	81°
	●	●	●	275		92.1	670	1060	1500	1840	2120	2600	3000	3350	3670	3960	78°	80°	83°
	●	●	●	150–45°		50.8	365	580	820	1000	1160	1420	1630	1830	2000	3160	45°	49°	52°
	●	●	●	175–45°		59.1	425	670	950	1170	1350	1650	1910	2130	2340	2520	45°	49°	51°
	●	●	●	200–45°		68.3	485	770	1090	1330	1540	1890	2180	2440	2670	2880	45°	48°	51°
	●	●	●	225–45°		74.6	550	870	1230	1500	1730	2120	2450	2740	3000	3240	45°	48°	50°
	●	●	●	250–45°		82.6	610	960	1360	1670	1930	2360	2720	3050	3340	3600	45°	47°	49°
6		●	●	250	124	62.3	610	960	1360	1670	1930	2360	2720	3050	3340	3600	65°	67°	69°
		●	●	300		69.9	730	1160	1630	2000	2310	2830	3270	3650	4000	4320	66°	68°	70°
		●	●	350		76.2	850	1350	1910	2340	2700	3300	3810	4260	4670	5050	68°	70°	72°
		●	●	400		82.6	970	1540	2180	2670	3080	3770	4360	4870	5340	5770	70°	73°	75°
		●	●	450		88.1	1100	1730	2450	3000	3470	4250	4900	5480	6010	6490	72°	75°	77°
		●	●	500		97.2	1220	1930	2720	3340	3850	4720	5440	6090	6670	7210	74°	76°	79°
		●	●	550		108	1340	2120	3000	3670	4240	5190	5990	6700	7340	7930	76°	79°	83°
		●	●	620		130	1520	2410	3410	4170	4820	5900	6810	7610	8340	9010	78°	81°	86°
		●	●	440–45°		88.1	1070	1700	2400	2940	3390	4150	4790	5360	5870	6340	60°	61°	62°
		●	●	550–45°		108	1340	2120	3000	3670	4240	5190	5990	6700	7340	7930	64°	65°	66°
		●	●	625–45°		130	1520	2410	3410	4170	4820	5900	6810	7610	8340	9010	65°	66°	67°

4. Design Features of Large Flow Silicone Carbide Spray Nozzle



As a whole made of carborudum

Features

Spray pattern: hollow cone

Spray angle: 70- 90 degree

Flow rate: 285-5900 L/ min at 3 bar

Inlet size: 2, 3, 4, 6 inch

Material: silicone carbide

Technical Data Sheet

flange inlet	Capacity Size	Inlet Dia. Nom. Size (mm)	Orifice Dia. No. Size (mm)	Capacity liters per minute										Spray angle		
				0.2 bar	0.5 bar	1 bar	1.5 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	0.5 bar	1.5 bar	4 bar
2	30–40°	36.5	23.8	73	116	163	200	230	285	325	365	400	430	70°	85°	90°
	35–45°		27.0	85	135	191	235	270	330	380	425	465	500	70°	85°	90°
	40–45°		30.2	97	154	220	265	310	375	435	490	530	580	70°	85°	90°
	45–45°		32.1	110	173	245	300	345	425	490	550	600	650	70°	85°	90°
	50–45°		34.9	122	193	270	335	385	470	540	610	670	720	70°	85°	90°
	55–45°		36.9	134	210	300	365	425	520	600	670	730	790	70°	85°	90°
3	70	57.2	34.9	171	270	380	465	540	660	760	850	930	1010	70°	85°	90°
	85		40.1	205	325	465	570	650	800	930	1040	1130	1230	70°	85°	90°
	100		44.5	245	385	540	670	770	940	1090	1220	1330	1440	70°	85°	90°
	120		52.4	290	460	650	800	920	1130	1310	1460	1600	1730	70°	85°	90°
	140		58.7	340	540	760	930	1080	1320	1530	1710	1870	2020	70°	85°	90°
	55–45°		34.9	171	270	380	465	540	660	760	850	930	1010	70°	85°	90°
	85–45°		40.1	205	325	465	570	650	800	930	1040	1130	1230	70°	85°	90°
	100–45°		44.5	245	385	540	670	770	940	1090	1220	1330	1440	70°	85°	90°
	120–45°		51.2	290	460	650	800	920	1130	1310	1460	1600	1730	70°	85°	90°
	140–45°		58.7	340	540	760	930	1080	1320	1530	1710	1870	2020	70°	85°	90°
4	150	79.4	50.8	365	580	820	1000	1160	1420	1630	1830	2000	2160	70°	85°	90°
	175		59.1	425	670	950	1170	1350	1650	1910	2130	2340	2520	70°	85°	90°
	200		68.3	485	770	1090	1330	1540	1890	2180	2440	2670	2880	70°	85°	90°
	225		74.6	550	870	1230	1500	1730	2120	2450	2740	3000	3240	70°	85°	90°
	250		82.6	610	960	1360	1670	1930	2360	2720	3050	3340	3600	70°	85°	90°
	275		92.1	670	1060	1500	1840	2120	2600	3000	3350	3670	3960	70°	85°	90°
	150–45°		50.8	365	580	820	1000	1160	1420	1630	1830	2000	3160	70°	85°	90°
	175–45°		59.1	425	670	950	1170	1350	1650	1910	2130	2340	2520	70°	85°	90°
	200–45°		68.3	485	770	1090	1330	1540	1890	2180	2440	2670	2880	70°	85°	90°
	225–45°		74.6	550	870	1230	1500	1730	2120	2450	2740	3000	3240	70°	85°	90°
	250–45°		82.6	610	960	1360	1670	1930	2360	2720	3050	3340	3600	70°	85°	90°
6	250	124	62.3	610	960	1360	1670	1930	2360	2720	3050	3340	3600	70°	85°	90°
	300		69.9	730	1160	1630	2000	2310	2830	3270	3650	4000	4320	70°	85°	90°
	350		76.2	850	1350	1910	2340	2700	3300	3810	4260	4670	5050	70°	85°	90°
	400		82.6	970	1540	2180	2670	3080	3770	4360	4870	5340	5770	70°	85°	90°
	450		88.1	1100	1730	2450	3000	3470	4250	4900	5480	6010	6490	70°	85°	90°
	500		97.2	1220	1930	2720	3340	3850	4720	5450	6090	6670	7210	70°	85°	90°
	550		108	1340	2120	3000	3670	4240	5190	5990	6700	7340	7930	70°	85°	90°
	620		130	1520	2410	3410	4170	4820	5900	6810	7610	8340	9010	70°	85°	90°
	440–65°		88.1	1070	1700	2400	2940	3390	4150	4790	5360	5870	6340	70°	85°	90°
	550–65°		108	1340	2120	3000	3670	4240	5190	5990	6700	7340	7930	70°	85°	90°
	625–65°		130	1520	2410	3410	4170	4820	5900	6810	7610	8340	9010	70°	85°	90°

5. Large Flow BBS / BBW Full Cone Nozzle



Full cone spray

Features

BBS/BBW series solid conical nozzle is composed of nozzle body and lotus root leaf. The specially designed lotus root blade not only provides excellent atomization effect, but also reduces the length of the nozzle. Compared with other types of solid conical nozzles, the total length of BBS/BBW solid conical nozzles is shortened by 35%, effectively solving the installation problem of narrow space and reduced the cost of raw materials.

Technical Data Sheet

Angle	Thread	Capacity size	Orifice size (mm)	Minimum diameter (mm)	Flow rate under pressure (L/min)								H (mm)	H1 (mm)	WS (mm)
					0.5	0.7	1.0	2.0	3.0	5.0	7.0	10			
90°	3/4″	**039**	6.1	3.0	12.5	14.7	17.6	24.9	30.5	39.4	46.6	55.7	22	10	32
		049	6.7	3.0	15.7	18.6	22.2	31.4	38.5	49.7	58.8	70.3			
		062	7.8	4.0	20.0	23.7	28.3	40.0	49.0	63.3	74.8	89.5			
	1″	**078**	9.0	4.0	24.9	29.5	35.2	49.8	61.0	78.7	93.2	111	27	12	40
		100	10.5	5.0	31.8	37.7	45.0	63.7	78.0	101	119	142			
	1-1/4″	**157**	12.5	6.0	50.2	59.4	71.0	100	123	159	188	225	30	14	50
	1-1/2″	**248**	16.0	6.0	79.2	93.7	112	158	194	250	296	354	35	16	60
	2″	**396**	20.0	7.0	127	150	179	253	310	400	474	566	45	18	75
		491	23.0	9.0	158	186	223	315	386	498	590	705			
	2-1/2″	**626**	25.0	12.0	200	237	283	400	490	633	748	895	52	22	90
		779	28.5	13.0	249	295	352	498	610	788	932	1114			
	3″	**988**	32.0	16.0	316	374	447	633	775	1001	1184	1415	60	24	110
120°	3/4″	**063**	7.9	3.0	20.0	23.7	28.3	40.0	49.0	63.3	74.8	89.5	38	11	32
	1″	**100**	13.7	6.0	31.8	37.7	45.0	63.7	78.0	101	119	142	47	15	40
	1-1/4″	**157**	12.7	6.0	50.2	59.4	71.0	100	123	159	188	225	62	19	50
	1-1/2″	**248**	16.0	6.0	79.2	93.7	112	158	194	250	296	354	77	21	50
	2″	**396**	20.0	10.0	127	150	179	253	310	400	474	566	99	24	60
		491	22.7	10.0	158	186	223	315	386	498	590	705			
	2-1/2″	**626**	25.5	12.0	200	237	283	400	490	633	748	895	123	27	75
		779	30.0	13.0	249	295	352	498	610	788	932	1114			
	3″	**988**	32.0	14.0	316	374	447	633	775	1001	1184	1415	150	30	85

OEM and ODM Service

We have rich OEM & ODM experience on many world-famous companies over the past 20 years.
For spray nozzle / lances for Nitrogen dioxide removal, we are glad to produce customized products based on our customer's special requirement, so that realize the best DeNOx performance and result for the exhaust gas emission.

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OUR COOPERATION !