

LINEUP OF IKEUCHI'S SPRAY NOZZLES



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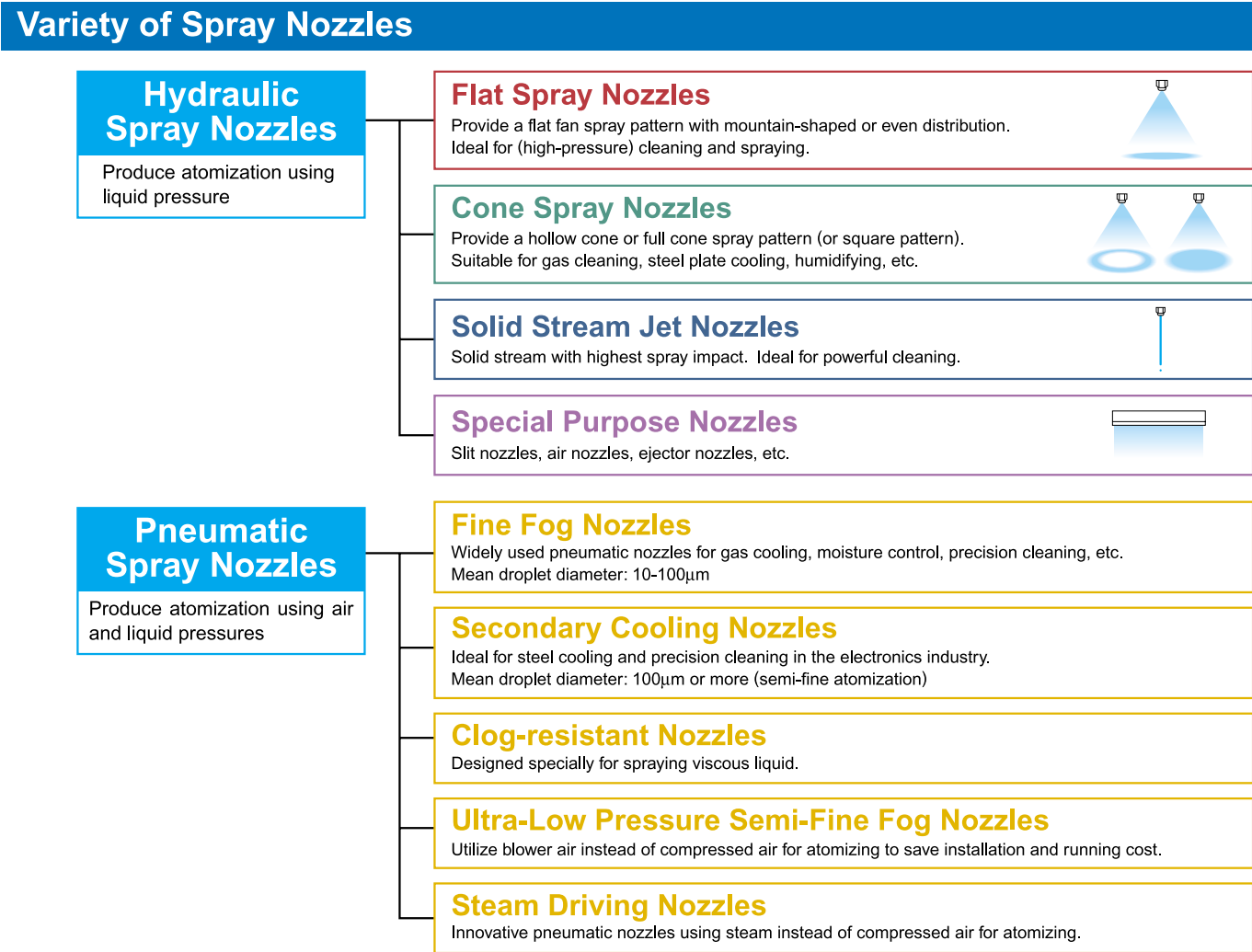
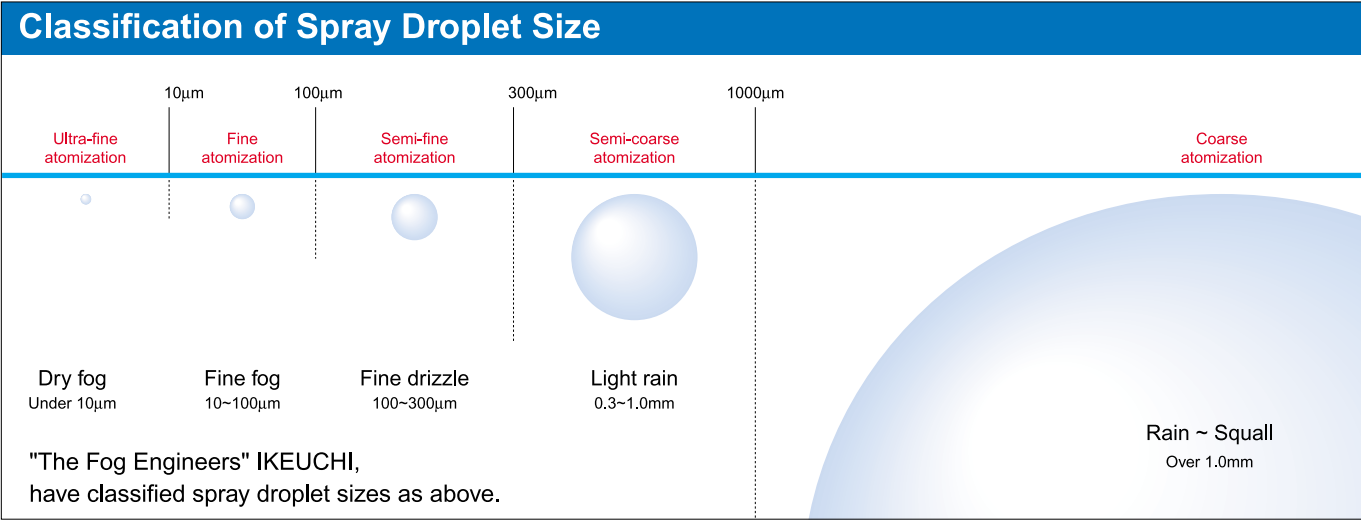
“The Fog Engineers”
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IKEUCHI, "The Fog Engineers"

Based on accumulated advanced technology and know-how as fog engineers, IKEUCHI continues to pursue methods to generate and utilize fog to meet the ever diversifying and sophisticated needs of its customers, and to contribute to the development of a greater industrial world.

Accuracy Guarantee on Nozzle Performance







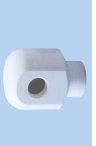


IKEUCHI's hydraulic nozzles are guaranteed for spray capacities within $\pm 5\%$ and spray angles within $\pm 5^\circ$.








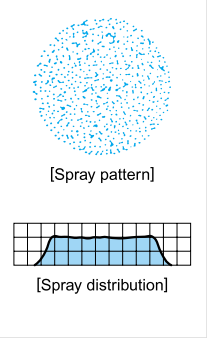







HYDRAULIC SPRAY NOZZLES — CONE SPRAY

[Symbol key] ●: Features ■: Main applications



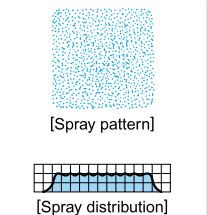
Hollow Cone Spray Nozzles

		Fine fog, ultra-small capacity KB series	<ul style="list-style-type: none"> ● Finest atomization among hydraulic nozzles, with high wear resistant ceramic tip. ■ Humidifying, cooling, spraying, etc. 		Fine fog, ultra-small capacity KBN series	<ul style="list-style-type: none"> ● Finest atomization among hydraulic nozzles. Low cost plastic nozzle with ceramic orifice. ■ Cooling, humidifying, dust suppression
		Semi-fine fog, small capacity K series	<ul style="list-style-type: none"> ● Ceramic orifice and closer provide excellent wear-resistance. ■ Humidifying, cooling, spraying, etc. 			
		Small capacity KD series	<ul style="list-style-type: none"> ● Semi-fine atomization, compact design with ceramic orifice and whirler for high wear-resistance. ■ Cooling, spraying, etc. 		Medium capacity AP-AL92 series	<ul style="list-style-type: none"> ● Stable spray pattern under low pressure. ● Made of high-alumina ceramic; excellent wear-resistance. ■ Cooling, cleaning, etc.
		Medium capacity AAP series	<ul style="list-style-type: none"> ● Stable spray pattern for a wide range of operating pressures. No whirler design minimizes clogging. ■ Cooling, spraying, cleaning, etc. 			Large capacity TAA series



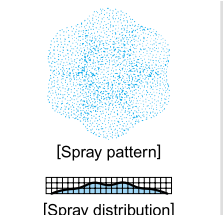

Full Cone Spray Nozzles

		Small capacity J series	<ul style="list-style-type: none"> ● Smallest spray capacity among full cone spray nozzles. High wear-resistance due to ceramic orifice and ceramic closer. ■ Spraying, cleaning, cooling, etc. 		Quick detachable INJJX(-Y) series	<ul style="list-style-type: none"> ● Quick installation without tools, saving maintenance time. ■ Applications that require accurate nozzle positioning. * Successor to ISJJX(-Y) series
		Standard type JJXP series	<ul style="list-style-type: none"> ● Spray capacity ranges from small to medium. X-shaped whirler provides largest free passage for minimal clogging. Available in brass, stainless steel, PVDF. ■ Cleaning, cooling, spraying, etc. 			Small capacity JJRP series
		Ceramic orifice & whirler JUP series	<ul style="list-style-type: none"> ● Ceramic disc whirler and ceramic orifice provide excellent wear-resistance. ■ Cleaning, cooling, spraying, etc. 			Quick-detachable etching SNAPJet® series
		All alumina JUXP series	<ul style="list-style-type: none"> ● Made of high-purity alumina ceramic; excellent wear-resistance. ■ Spraying in absorber of gas desulfurization equipment or slurry spraying. 			Narrow-angle spray NJJP series
	Large capacity TJJX series	<ul style="list-style-type: none"> ● Large spray capacity, flange connection. ■ Cooling, reacting, spraying, etc. 		Clog-resistant AJP series		<ul style="list-style-type: none"> ● Unique design having no whirler to produce full cone spray minimizes clogging. Material option: high-purity alumina ceramic for high wear-resistance. ■ Cleaning, cooling, applications where clogging is a concern.
						Wide-angle spray BBXP series

Square Spray Nozzles

		Square spray SSXP series
	<ul style="list-style-type: none"> ● Square spray pattern with uniform distribution, which leaves no gaps in multiple-nozzle arrangements. ■ Cleaning, cooling, spraying. 	



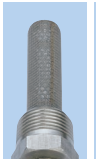
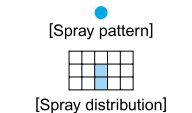

Special Full Cone Spray Nozzles

		7-head, fine fog 7KB series	<ul style="list-style-type: none"> ● 7pcs. of KB hollow cone spray nozzles with compact adaptor produce large volume of fine atomization. ■ Gas cooling, moisture control, humidification.
		7-head, standard type 7JJXP series	<ul style="list-style-type: none"> ● 7pcs. of JJXP full cone spray nozzles with compact adaptor. Spray droplet diameter is about half the size of other full cone spray nozzles having the same spray capacity. ■ Gas cooling, dust suppression, etc.

HYDRAULIC SPRAY NOZZLES — SOLID STREAM

[Symbol key] ●: Features ■: Main applications


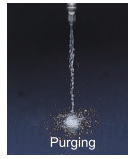



Solid Stream Spray Nozzles

		Standard type CP/CCP series	<ul style="list-style-type: none"> ● Highest impact solid stream. Much larger flow of solid stream than other solid stream nozzles having the same orifice diameter. ■ High pressure cleaning. 		Trimming nozzles CM/CTM, CMP-T series	<ul style="list-style-type: none"> ● Extra fine solid stream with high impact cutting force. Spray orifice available in alumina ceramic, sapphire or tungsten carbide. ■ Paper trimming, cleaning of precision machine parts, food cutting, etc.
			Convex round inlet CRP/CCRP series			

Multiple-orifice Solid Stream Spray Nozzles

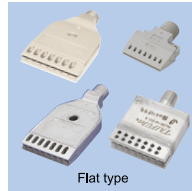

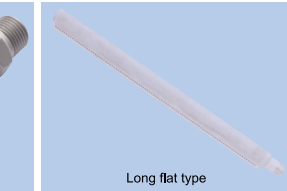


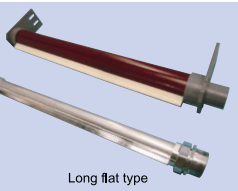
					Multiple-orifice Solid Stream 2CP/2CCP series 7CP/7CCP series	<ul style="list-style-type: none"> ● Multiple solid streams with high impact force. 2-orifice and 7-orifice types are available. Compact design. ■ Bottle washing, cleaning dandy rolls and returnable containers, etc.
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Special Solid Stream Spray Nozzles

			Self-cleaning MOMOJet®"C" series			Pipe cleaning RSP series
<ul style="list-style-type: none"> ● Spray tip purges foreign particles by reducing the pressure. Straight-through orifice is suitable for multiple-nozzle arrangement. ■ Cleaning with circulated water, cooling, defoaming, and cleaning wire and felt parts of paper making machines. 			<ul style="list-style-type: none"> ● Cleans inside pipes and tubes, moves by spraying high-impact solid stream jets in different directions as driving force. ■ Cleaning inside pipes/drains/tubes, removing scale and dirt inside tubes of heat exchangers and cooling machines 			

SPECIAL PURPOSE NOZZLES

Air Nozzles

TAIFUJet® series					
					
For compressors			For blowers		
<ul style="list-style-type: none"> ● Takes in surrounding air, boosting the volume of powerful air flow. Available in stainless steel or plastic. ■ Blow-off drying/dust, cleaning, cooling, etc. 					




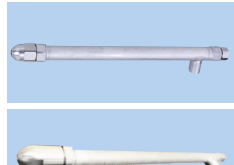



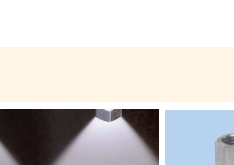
Special Purpose Nozzles / Accessories

				
SLNH-H/SLNHA-H series <ul style="list-style-type: none"> ● Slit nozzles with thin laminar flow of water or air. 	SPB series <ul style="list-style-type: none"> ● Spray capacity is variable without changing spray pressure. Single/multiple-head, single/multiple-orifice type. 	ES series <ul style="list-style-type: none"> ● Compact rotating nozzle; rotates by cleaning liquid force only. Ideal for tank cleaning, CIP cleaning. 	EJX series <ul style="list-style-type: none"> ● Spouts out 3-4 times the supplied amount. Ideal for solution agitation. 	UT Ball Joints <ul style="list-style-type: none"> ● Adaptor for adjusting spray direction. Metal or plastic.

PNEUMATIC SPRAY NOZZLES

[Symbol key] ●: Features ■: Main applications



Fine Fog Nozzles

		Small capacity BIM series CBIM series	<ul style="list-style-type: none"> Fine atomization with mean droplet diameters 10-50μm. Unique, minimal-clogging design. Available in flat/full cone/hollow cone spray pattern. Spray can be regulated by turning compressed air ON/OFF with controlling adaptors. CBIM nozzles: Ultra compact, 1/4 of BIM nozzle in volume.
		Medium / Large capacity GBIM series	<ul style="list-style-type: none"> Large spray capacity, low air-water ratio. Produces fine atomization with multistage atomization mechanism.
		Medium / Large capacity GSIM II series	<ul style="list-style-type: none"> Large spray capacity, low air-water ratio. Simple structure, easy maintenance.
		Impinging-atomization AKIJet series	<ul style="list-style-type: none"> Atomized droplets are impinged against each other at optimum condition, which results in uniform distribution of droplet size.



Fog Nozzles

		Flat spray VVEA series	<ul style="list-style-type: none"> Thin and sharp spray pattern with high impact. Stable spray angle over large turndown ratio.
		Slit nozzles PSN series	<ul style="list-style-type: none"> Pneumatic slit nozzles providing uniform spray in the total width. Achieve higher spray impact by installing closer to the object.
		Flat spray DOVEA series	<ul style="list-style-type: none"> Secondary cooling nozzles developed to satisfy crucial requirements for spray nozzles in continuous casting processes in steel making. Minimal variation in spray angle, spray distribution and droplet size over a large turndown ratio. A large free passage diameter. DOVEA series for flat spray pattern, DDA for oval spray, JJA for full cone spray.
		Oval spray DDA series	
		Full cone spray JJA series	



Clog-resistant Nozzles

		Minimal clogging SETO series	<ul style="list-style-type: none"> Pneumatic spray nozzle specially designed for spraying viscous liquid. Clog-resistant design. External mixing type that air and liquid are mixed outside nozzle for atomization.
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Ultra-Low Pressure Semi-Fine Fog Nozzles



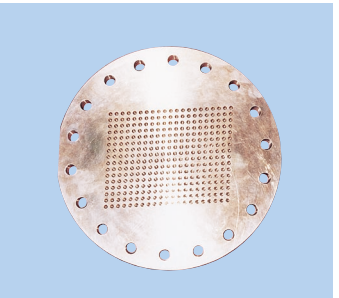
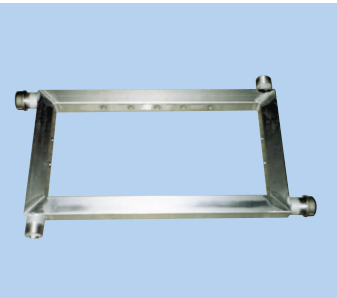
	Semi-fine fog LSIM series
	<ul style="list-style-type: none"> Semi-fine atomization by applying blower air pressure. Saves on installation and running cost due to utilizing blower air for atomizing.

Steam Driving Nozzles

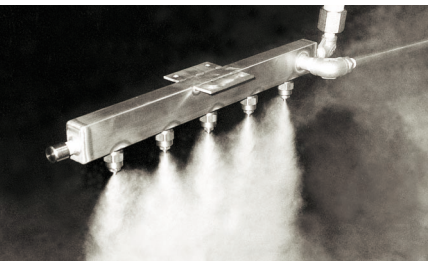
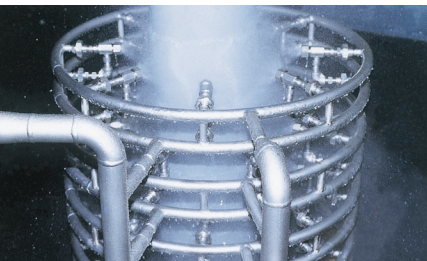
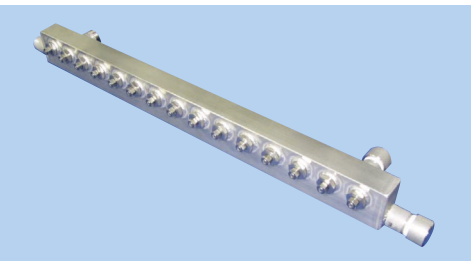
	Steam driving JOKIJet series
	<ul style="list-style-type: none"> Atomization by steam instead of compressor air. Drastic saving on running cost.

SPRAY NOZZLES HEADER / APPLIED EQUIPMENT


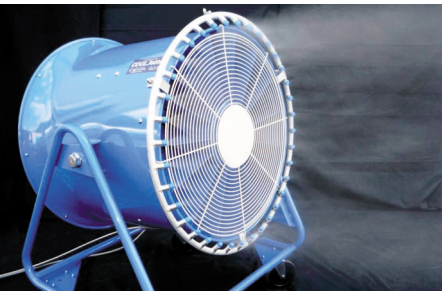
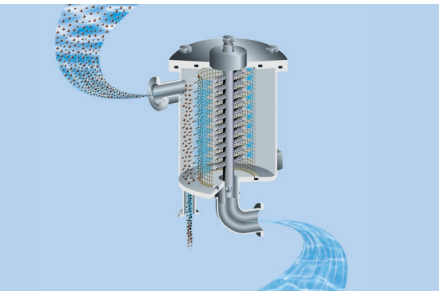
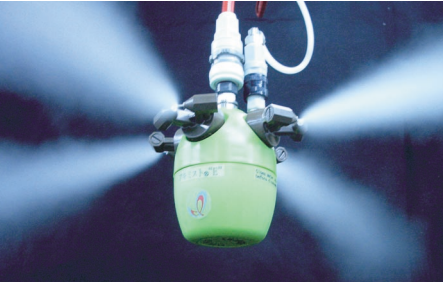


Hydraulic Spray Nozzle Header

BRASIKan® series	MOMOJet® Spray Header	Multi-hole Parallel Solid Stream	CVVP Spray Header
			
<ul style="list-style-type: none"> Spray header with inner brush, which clears the clog by turning a handwheel. 	<ul style="list-style-type: none"> Spray header with MOMOJet®, purging foreign particles by reducing the pressure. 	<ul style="list-style-type: none"> Many spray tips implanted into a flat plate produce a solid stream jet that is parallel. 	<ul style="list-style-type: none"> Coin-shaped CVVP nozzles set in header without bulge. Space-saving.

Pneumatic Spray Nozzle Header

BIM Spray Header	Ring Header	VVEA Spray Header
		
<ul style="list-style-type: none"> Integrated BIM fine fog spray header combining air and water pipes into one rectangular header. Compact and easy installation. 	<ul style="list-style-type: none"> Ring header equipped with pneumatic nozzles, providing uniform spray from all directions. 	<ul style="list-style-type: none"> Integrated VVEA high impact spray header combining air and water pipes into one rectangular header. Compact and easy installation.

Related Products Applying Nozzles

LYOHM System for outdoor cooling	Fog cooling fan COOLJetter ®	Auto Reverse Self-cleaning Filter ARS Filter
		
<ul style="list-style-type: none"> Low-cost cooling system with Semi Dry Fog®, which provides effective evaporative cooling effect without wetting people. 	<ul style="list-style-type: none"> Combined unit of a fan and nozzles that can blow Semi Dry Fog® further and broader using fan wind. Ideal for cooling and dust suppression. 	<ul style="list-style-type: none"> Auto reverse self-cleaning by powerful jet spraying. Water saving and minimal maintenance.
Dry Fog Humidifier AKIMist ®"E"	Industrial humidification system AirAKI ®	Cooling System
		
<ul style="list-style-type: none"> Compact, high efficiency humidifier that produces a large volume of Dry Fog (non-wetting fog). Energy-saving design. 	<ul style="list-style-type: none"> The world's first humidification system that guarantees the target humidity using the highest quality Dry Fog. 	<ul style="list-style-type: none"> Industrial cooling solution for solid and gas, offered by our "Cooling Division".