

# Large Capacity Impinging-type Fine Fog Nozzles

AKIJet®-S

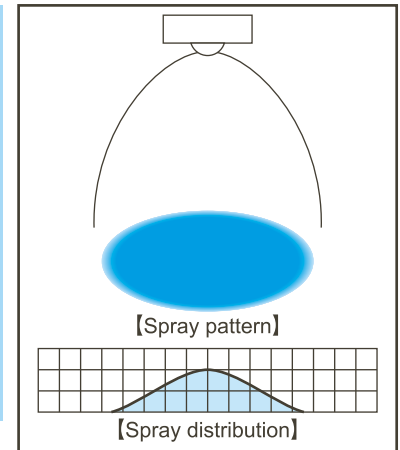
## Features

- Large capacity impinging-type AKIJet® nozzle.
- Atomized droplets are impinged against each other creating ultrasonic waves, which results in creation of a uniform distribution of even finer droplet sizes.
- Produces a large volume of fine atomization up to 1,000 l/hr with a mean droplet diameter of 100 μm or less.\*1
- Minimal clogging due to the liquid orifices being set at the end of the spray tips.

\*1) Droplet diameter measured by Fraunhofer diffraction method.  
Please see pages 6-7 for comparison with laser Doppler method.



L: AKI150SS316+HS316  
R: AKI370SS316+HS316

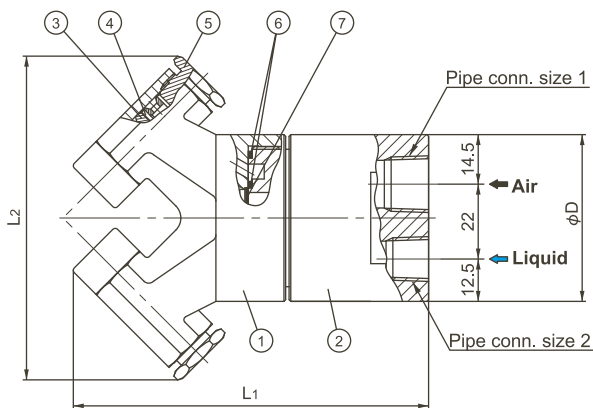


## Applications

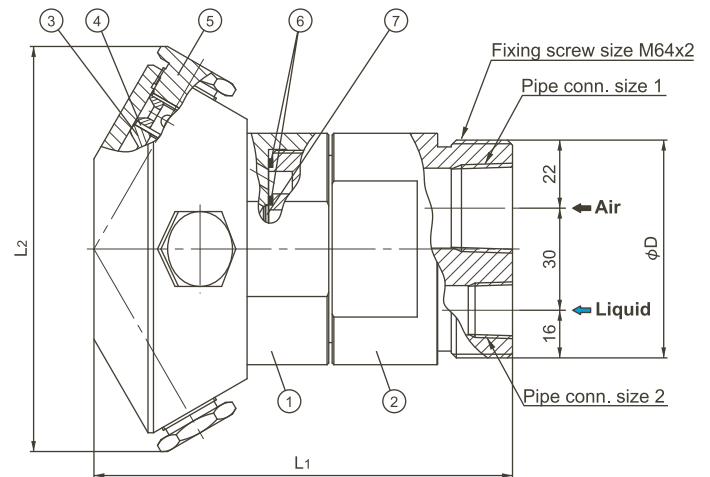
- Cooling: Gas, refractories, moldings, glass
- Moisture control: Flue gas, concrete
- Combustion: Oil, waste water
- Others: Mixing two liquids, spray drying

## Structure & Materials

### ■ AKI150S S316 + HS316 (metal-to-metal seal)



### ■ AKI370S S316 + HS316 (metal-to-metal seal)



### ■ Components and materials

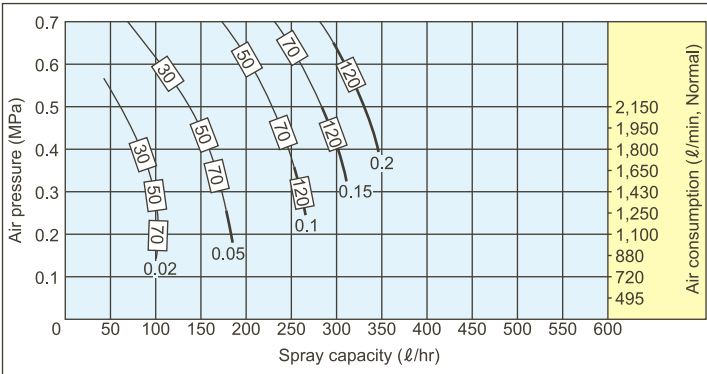
No.	Components	Standard materials
①	Nozzle body	S316 equivalent
②	Adaptor	S316
③	Spray tip	S316
④	Liner	S316
⑤	Plug	S316
⑥	O-ring	S321
⑦	Strainer	S316

## Dimensions & Pipe Connection Sizes

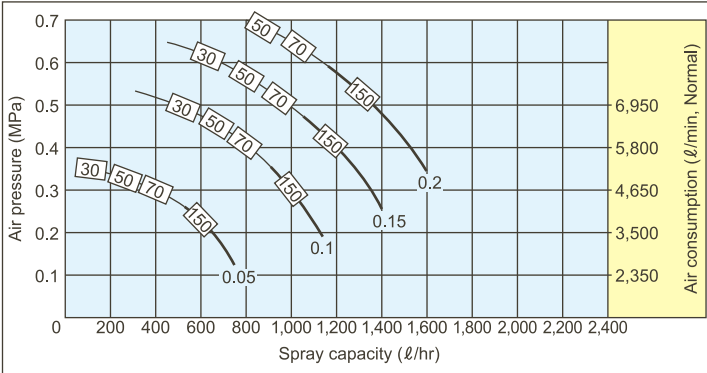
Nozzle code	L1 (mm)	L2 (mm)	φD (mm)	Pipe connection size		Free passage diameters (mm)		Mass (g)
				1 (Air)	2 (Liquid)	Air	Liquid	
AKI150S	111	94	49	Rc3/8	Rc1/4	0.9	2.0	980
AKI370S	123	(117)	68	Rc3/4	Rc3/8	1.3	4.3	3,700

Flow-rate Diagrams

AKI150S



AKI370S



How to read the chart

- ① The spray capacity shown is for one nozzle.
- ② Thin solid lines (—) represent fine atomization zone.  
Bold lines (—) represent semi-fine atomization zone.
- ③ Figures at the foot of each curve indicate liquid pressures in MPa.
- ④ Figures in squares □ on each curve indicate Sauter mean droplet diameters (μm) measured by the immersion sampling method.

Spray Dimensions

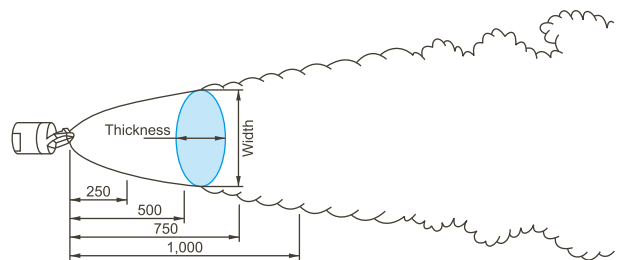
AKI150S

Air pressure (MPa)	Liquid pressure (MPa)	Spray width (mm)				Spray thickness (mm)			
		250 mm	500 mm	750 mm	1,000 mm	250 mm	500 mm	750 mm	1,000 mm
0.2	0.02	280	450	650	840	80	120	170	210
	0.05	360	520	750	950	120	160	210	250
	0.10	440	660	880	1,120	150	190	240	270
	0.15	490	720	940	1,190	160	210	260	300
0.3	0.02	240	400	590	780	110	150	210	260
	0.05	340	500	720	930	140	190	240	290
	0.10	400	650	840	1,080	170	230	280	320
	0.15	500	720	940	1,200	170	230	290	330
0.4	0.02	190	340	530	720	110	160	210	270
	0.05	310	470	680	890	130	180	240	290
	0.10	420	620	850	1,080	160	220	280	320
	0.15	490	710	940	1,200	170	240	300	340
0.5	0.05	260	410	620	850	110	170	220	280
	0.10	390	580	820	1,060	130	190	260	300
	0.15	490	700	930	1,190	150	220	280	330
	0.20	600	830	1,060	1,280	200	240	320	380

AKI370S

Air pressure (MPa)	Liquid pressure (MPa)	Spray width (mm)			
		250 mm	500 mm	750 mm	1,000 mm
0.2	0.05	320	430	550	670
	0.10	360	490	620	750
	0.15	380	530	670	820
	0.20	400	550	700	860
0.3	0.05	220	300	390	480
	0.10	320	430	530	640
	0.15	390	510	630	750
	0.20	420	550	680	800
0.4	0.10	260	340	430	510
	0.15	340	430	520	610
	0.20	380	480	580	680
0.5	0.10	210	290	370	450
	0.15	290	380	460	540
	0.20	330	420	510	600

Note: The above data were measured with tap water in a laboratory, in windless conditions.



**How to order AKIJet® series nozzles**

Please inquire or order for a specific nozzle as follows.

AKI37 S303 + TS303

AKI75 S303 + TS303

AKI150 S316 + HS316 (metal-to-metal seal)

**How to order AKIJet®-S series nozzles**

Please inquire or order for a specific nozzle using this coding system.

<Example> AKI150S S316+HS316 (metal-to-metal seal)

AKI 150S S316 + H S316 (metal-to-metal seal)

Nozzle code

■ 150S

■ 370S