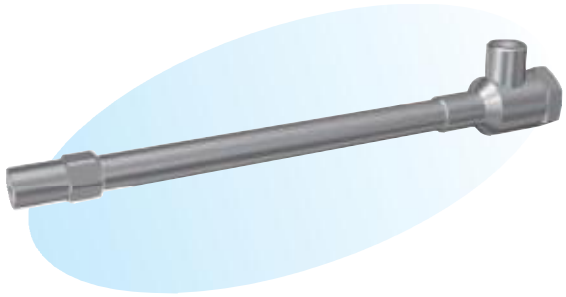
Air Mist Nozzles



▸ Features

- Simple internal structure of nozzle highly resistant to clogging and easy to maintain.
- Uniform water flow distribution.
- Various shapes such as compact and bent types.
- Low consumption of air.
- Wide control range.
- Small mean particle size and less discrepancy.
- Superwide angle type available.
- Can be mounted in a corner or limited space by using a mixing tube.
- High resistance to wear with long service life due to simultaneous flow of air.

▸ Applications

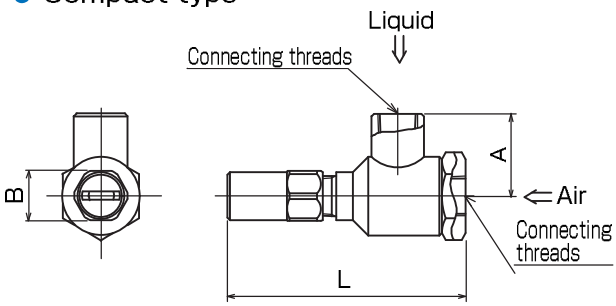
- Secondary cooling in continuous casting machines.
- Cooling of gases
- Spraying of chemicals
- Waste water atomizing
- Humidification in paper mill.

▸ Materials

- Nozzle tip : Stainless steel (standard material: SUS303) or brass
- Pipe : Stainless steel (standard material: SUS304TP)
- Mixing body: Stainless steel (standard material: SUS303 and 304)

Shapes and dimensions

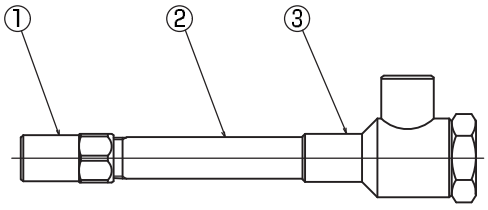
● Compact type



Model	Dimensions(mm)			Connecting threads		Weight (g)
	A	B	L	Liquid	Air	
¼ KSAME	34.5	17	100	Rc¼	Rc¼	200
⅜ KSAME	34.5	21	100	Rc⅜	Rc⅜	350
½ KSAME	49	26	140	Rc½	Rc½	850
¾ KSAME	49	32	150	Rc½	Rc½	1000

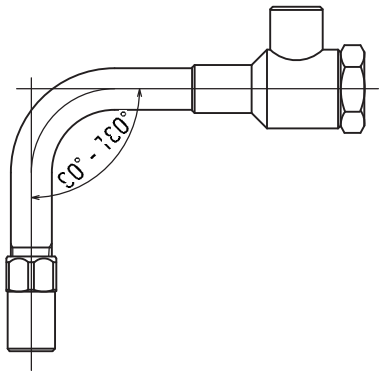
NPT thread is also available.

● Straight type

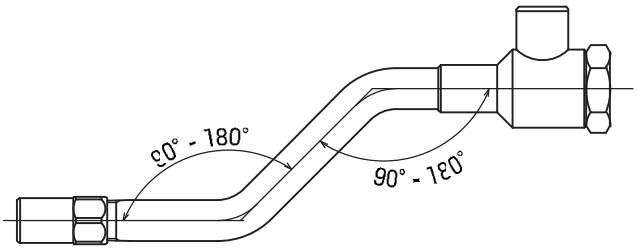


No.	Part name
①	Nozzle tip
②	Pipe
③	Mixing body

● Elbow type



● Bent type



●Model and Model Number representing

Model number of nozzle tip								Model number of mixing body				
1/4	K	S	A	M	E	1360	–	1/4	A	33	1/4	W 26
Connecting threads		Material S - stainless steel B - brass				Model number		Connecting threads for air			Connecting threads for liquid	

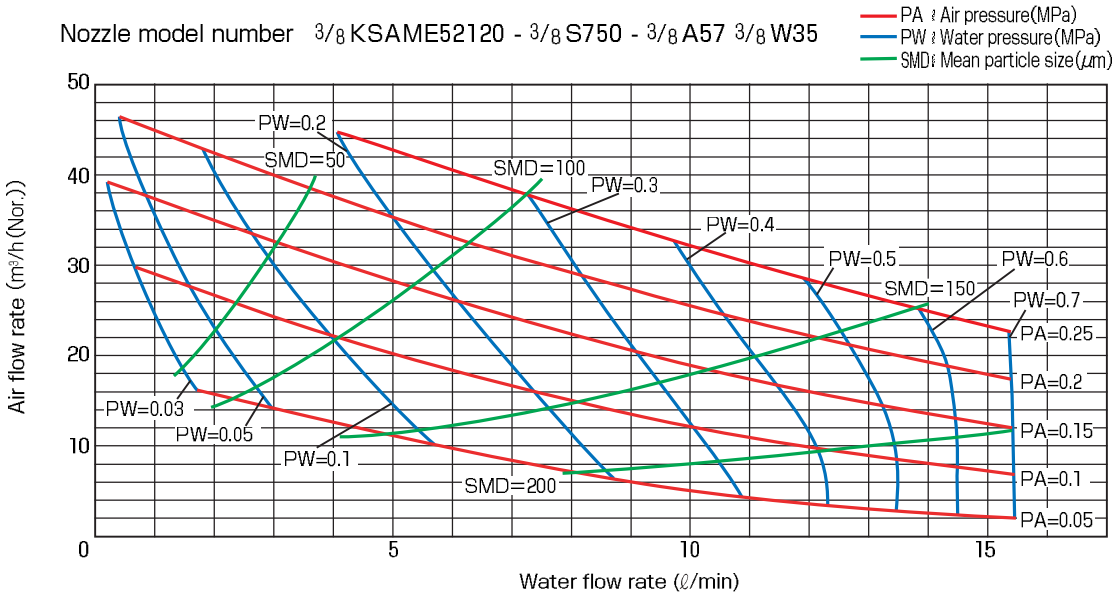
●Standard type model number list

Model number of nozzle tip	Model number of mixing body	Minimum orifice diameter for liquid (mm)	Air pressure (MPa)	Water flow rate (ℓ/min) and air flow rate (m³/h (Nor.)) at following water pressure (MPa)										Spray angle
				0.1		0.2		0.3		0.5		0.7		
				Water	Air	Water	Air	Water	Air	Water	Air	Water	Air	
1/4 KSAME 0740	1/4 A25 1/4 W20	2.0	0.1	0.9	3.3	2.3	1.3	3.3	0.5					Approx. 40°
			0.2			1.3	4.8	2.4	3.0	4.0	1.3			
			0.3			0.3	9.8	1.4	6.5	3.3	3.3	4.7	1.8	
			0.4					0.5	11.8	2.5	6.0	4.1	3.8	
1/4 KSAME 0960	1/4 A40 1/4 W23	2.0	0.1	0.8	4.7	3.0	1.3	4.3	0.4					Approx. 60°
			0.2			0.9	8.2	3.1	3.3	5.3	1.2	6.6	0.4	
			0.3					1.1	11.2	4.3	3.9	6.1	2.0	
			0.4							3.1	8.3	5.3	4.5	
1/4 KSAME 1362	1/4 A33 1/4 W26	2.2	0.1	1.5	5.0	3.8	1.9	5.4	0.6					Approx. 60°
			0.2			2.2	7.2	4.2	5.2	6.7	1.8	8.3	0.8	
			0.3			0.4	17.0	2.3	10.5	5.6	4.6	7.6	2.8	
			0.4					0.8	19.4	4.3	9.4	6.7	5.8	
1/4 KSAME 18143	1/4 A40 1/4 W28	1.5	0.1	1.8	8.4	4.4	3.6	6.2	2.0	8.1	0.8			Approx. 130°
			0.2			2.5	12.5	4.5	8.2	7.6	4.2	9.3	2.5	
			0.3					2.8	17.2	6.3	9.4	8.8	6.0	
			0.4							5.0	16.2	7.7	10.8	
3/8 KSAME 2258	3/8 A60 3/8 W33	2.9	0.1	1.7	11.7	6.3	3.5	9.2	1.4					Approx. 60°
			0.2			2.2	19.0	6.4	9.0	11.0	3.9	13.9	1.6	
			0.3					2.7	24.0	9.0	10.0	12.8	5.6	
			0.4							6.8	18.6	11.2	11.0	
3/8 KSAME 2690	3/8 A48 3/8 W38	2.3	0.1	3.3	11.8	8.5	4.0	11.5	1.5					Approx. 90°
			0.2	0.4	30.0	4.2	18.4	8.6	10.2	14.3	4.0	17.5	2.0	
			0.3			1.3	36.0	5.0	25.0	12.0	11.0	16.5	6.0	
			0.4					1.9	43.0	9.1	22.0	14.5	12.5	
3/8 KSAME 3375	3/8 A55 3/8 W43	3.0	0.1	4.0	13.5	11.0	4.2	15.2	1.8					Approx. 70°
			0.2			5.5	21.0	11.6	10.2	18.6	4.0	23.5	1.2	
			0.3			1.4	46.0	6.3	28.5	15.4	12.5	21.4	6.3	
			0.4					2.4	54.0	11.7	26.5	18.9	14.0	
3/8 KSAME 4196	3/8 A80 3/8 W46	3.3	0.1	3.5	18.3	12.0	5.0	17.0	1.5					Approx. 90°
			0.2			4.0	30.3	13.0	12.5	21.0	4.8	26.5	2.0	
			0.3					5.5	41.0	27.6	14.2	24.5	7.5	
			0.4							12.8	30.5	21.4	16.8	
1/2 KSAME 59133	1/2 A73 1/2 W51	2.7	0.1	6	26	15	11	22	5					Approx. 120°
			0.2	1	68	8	42	16	24	26	11	33	6	
			0.3					10	54	22	28	30	17	
			0.4							17	51	27	32	
1/2 KSAME 8096	1/2 A120 1/2 W59	3.9	0.1	5	40	21	11	29	4					Approx. 90°
			0.2			7	63	21	27	35	12	45	5	
			0.3					8	85	29	31	42	16	
			0.4							22	62	36	35	
1/2 KSAME 9596	1/2 A120 1/2 W66	4.4	0.1	7	45	26	12	37	5					Approx. 90°
			0.2			7	78	26	32	45	13	55	7	
			0.3					10	102	38	33	51	19	
			0.4							27	73	45	49	
1/2 KSAME 112144	1/2 A110 1/2 W73	3.6	0.1	10	47	30	13	42	5					Approx. 130°
			0.2			13	73	30	33	54	13	67	7	
			0.3					13	105	42	38	62	20	
			0.4							31	77	54	41	
3/4 KSAME 180145	1/2 A140 1/2 W96	5.0	0.1	16	85	59	22	76	9					Approx. 130°
			0.2					55	45	93	22	119	10	
			0.3							78	59	108	33	
			0.4							57	133	95	70	
3/4 KSAME 225141	1/2 A170 1/2 W120	6.0	0.1	23	80	78	17	110	5					Approx. 130°
			0.2					78	47	134	15			
			0.3							114	46	159	22	
			0.4							81	127	139	52	

●Performance data

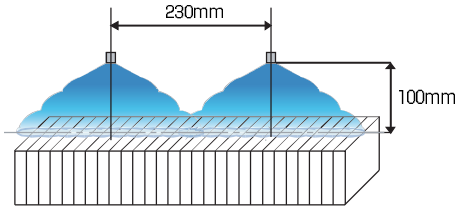
Characteristic curves

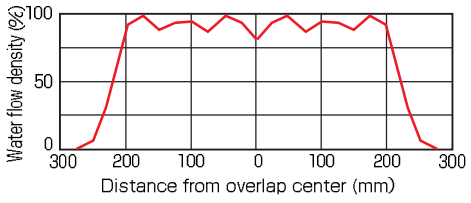
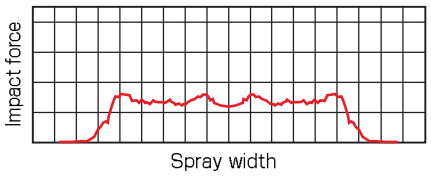
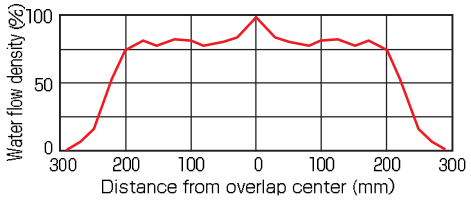
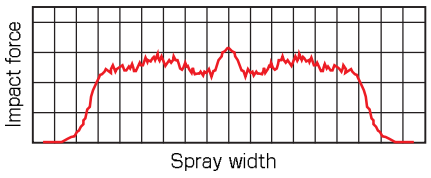
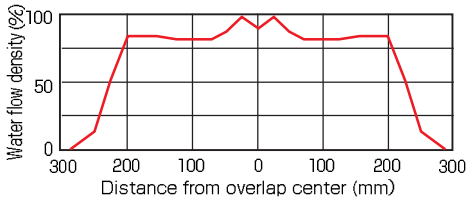
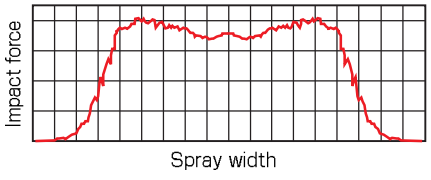
Nozzle model number 3/8KSAME52120 - 3/8S750 - 3/8A57 3/8W35



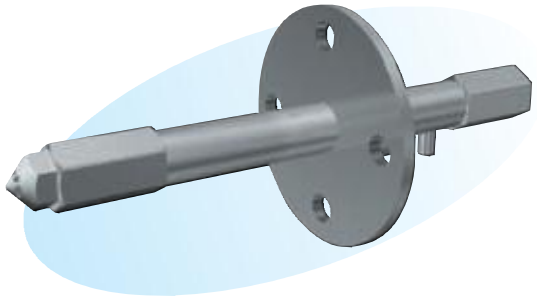
Distribution graphs

Nozzle model number 3/8KSAME52120 - 3/8S750 - 3/8A57 3/8W35



Water flow rate distribution	Impact force distribution	Test condition
		Air flow rate = 29.0 m³/h (Nor.) Water flow rate = 0.93 ℓ/min Air-water volume ratio = 520
		Air flow rate = 19.5 m³/h (Nor.) Water flow rate = 9.57 ℓ/min Air-water volume ratio = 34
		Air flow rate = 14.9 m³/h (Nor.) Water flow rate = 17.22 ℓ/min Air-water volume ratio = 14

KAM Nozzles (to Cool Gases) KAMX Type



Features

- Light weight and compact design
- Spray angle capacity from 40° to 80°.
- Prevention of dust adhesion by reducing large droplets in the spray periphery even at a low air-water volume ratio (air-water volume ratio: 100).

Applications

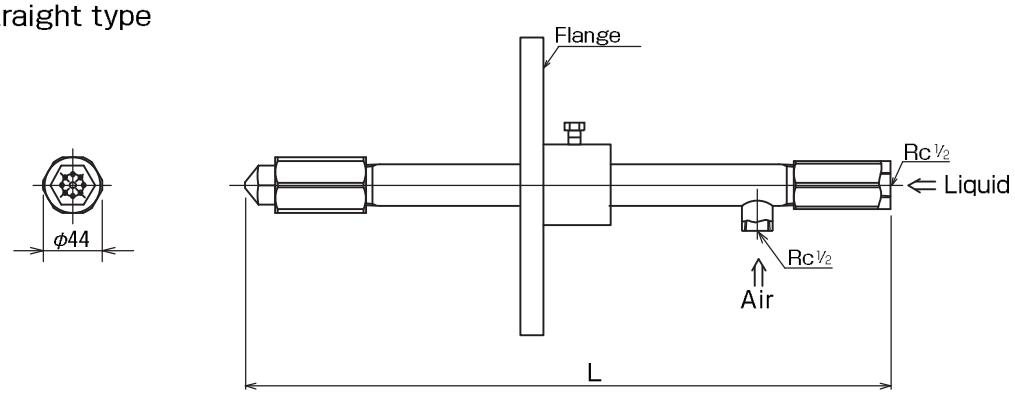
- Exhaust gas cooling in waste incineration plants and desuperheating tower.

Materials

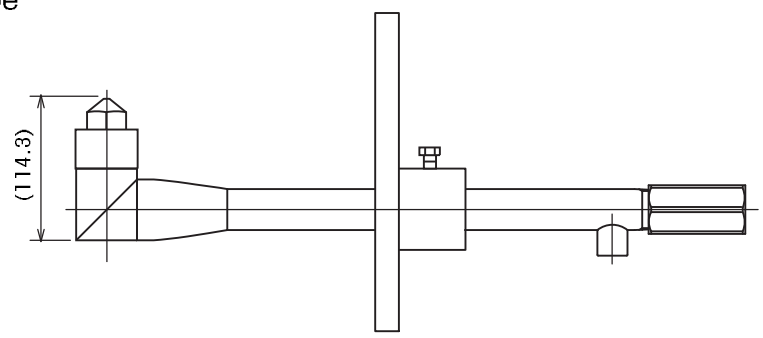
- Standard material: SUS316L (principal parts)

Shapes and dimensions

● Straight type



● Elbow type



NPT thread is also available.

※Dimension L and flange size are to be specified by the customer.

●Model and Model Number representing KAMX 500 (Model number)

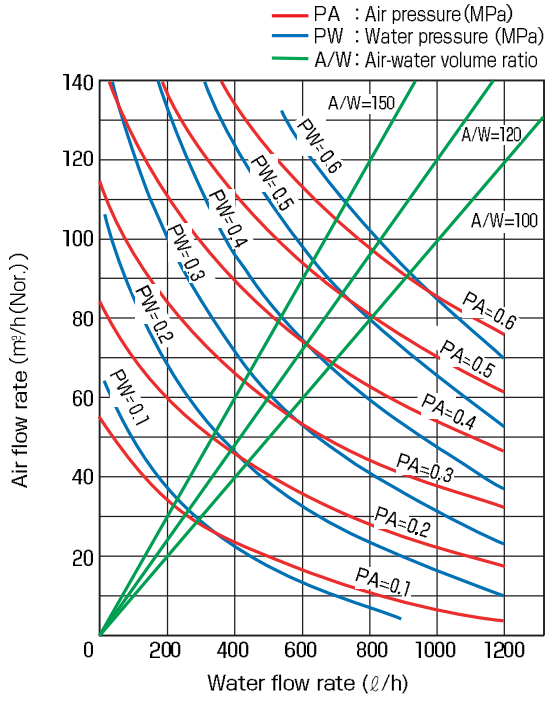
●Standard type model number list

Model	Model number	Minimum orifice diameter for liquid (mm)	Air-water volume ratio	Water flow rate (ℓ/h) at following water pressure (MPa)			
				0.2	0.3	0.4	0.5
KAMX	220	1.5	100	140	190	220	260
			150	120	160	190	220
			200	100	130	150	190
	300	1.7	100	220	280	340	400
			150	170	220	270	310
			200	140	180	220	260
	400	1.9	100	310	400	480	580
			150	250	310	380	440
			200	200	260	320	370
	500	2.1	100	380	490	590	670
			150	310	380	470	540
			200	240	310	390	460
	600	2.3	100	440	560	680	800
			150	350	440	540	630
			200	280	380	460	530
	750	3.0	100	520	660	800	930
			150	410	520	630	720
			200	340	430	520	600
	1000	3.4	100	650	830	1010	1170
			150	500	650	780	920
			200	420	540	650	770

●Performance data

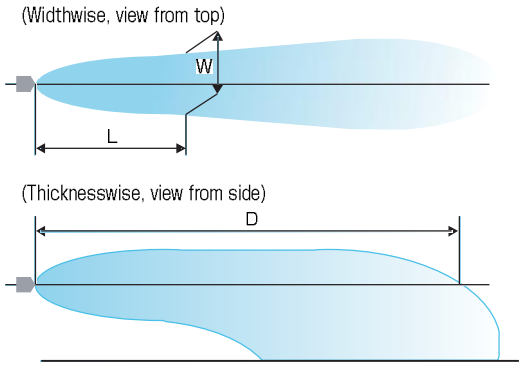
Characteristic curves

Nozzle model number KAMX600



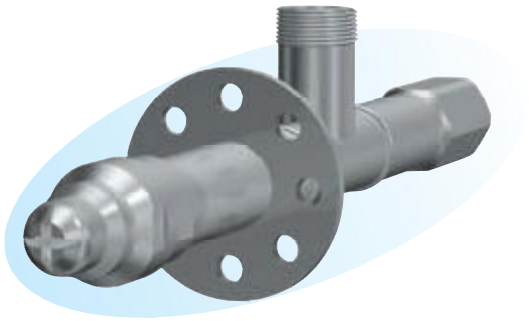
Spray patterns

Nozzle model number KAMX600



Air pressure (MPa)	Water pressure (MPa)	Air flow rate (m³/h (Nor.))	Water flow rate (ℓ/h)	Air-water volume ratio	Spray pattern value			
					D (mm)	W (mm) at L (mm)		
						1000	2000	3000
0.330	0.330	60.0	600	100	6000	650	850	950
0.480	0.460	90.0		150	6500	600	800	900
0.290	0.250	72.0	300	240	6000	600	800	900
0.220	0.180		150	480	5500	550	750	900

KAM Nozzles (to Cool Gases) KAML Type



Features

- Atomizing by blower air (low-pressure air at air-water volume ratio of 250).
- Light weight and compact design
- Wide-area spraying.

Applications

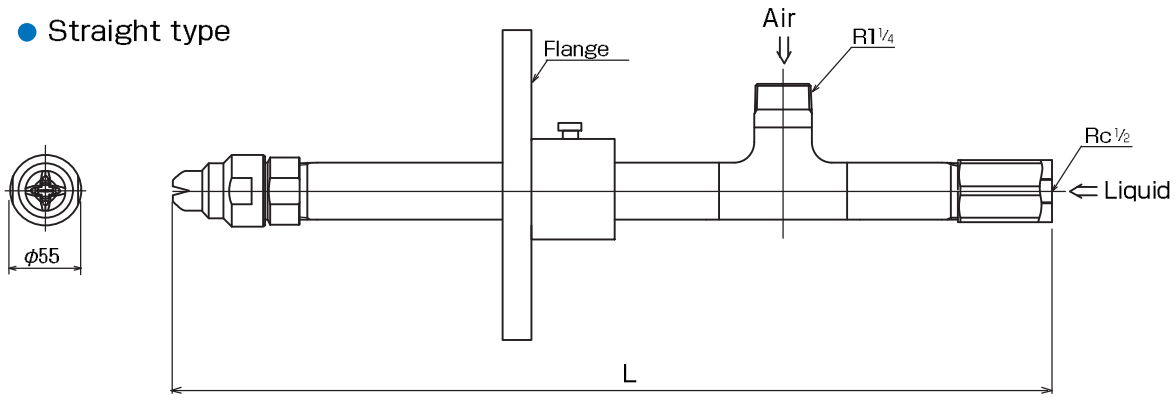
- Exhaust gas cooling in waste incineration plants and desuperheating tower.

Materials

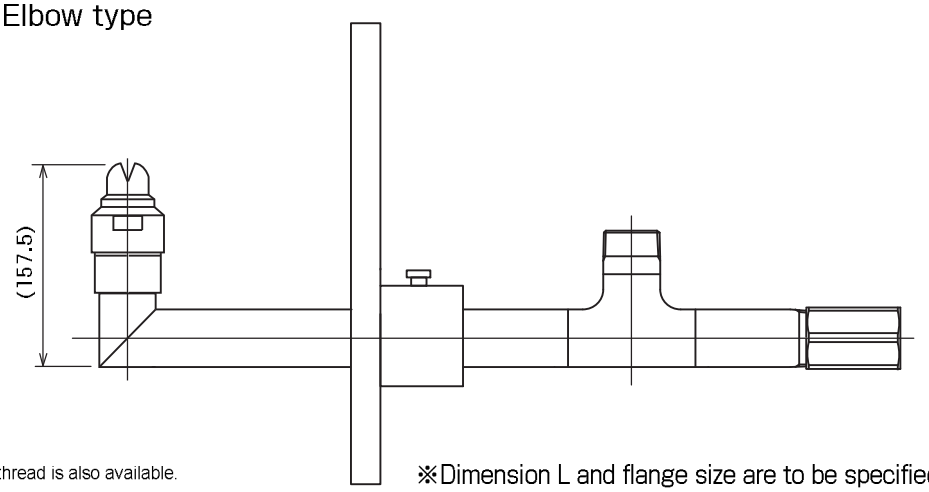
- Standard material: SUS316L (principal parts)

Shapes and dimensions

● Straight type



● Elbow type



NPT thread is also available.

※Dimension L and flange size are to be specified by the customer.

●Model and Model Number representing

KAML 500

Model number

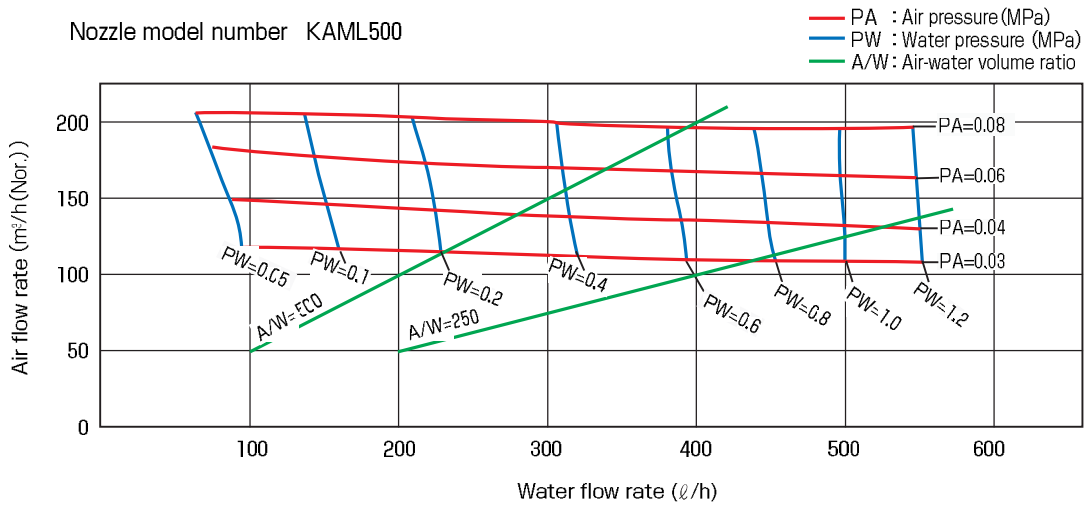
●Standard type model number list

Model	Model number	Minimum orifice diameter for liquid (mm)	Air pressure (MPa)	Water flow rate (ℓ/min) and air flow rate (m³/h (Nor.)) at following water pressure (MPa)												Spray angle
				0.05		0.1		0.2		0.4		0.8		1.2		
				Water	Air	Water	Air	Water	Air	Water	Air	Water	Air	Water	Air	
KAML	300	0.9	0.03	60	75	90	75	138	73	192	71	276	68	336	67	40°
			0.04	54	87	90	86	138	85	192	83	276	81	336	81	
			0.06	42	112	78	110	132	108	186	105	270	102	330	100	
			0.08	30	130	72	129	126	128	186	125	270	122	330	121	
	500	1.1	0.03	96	119	162	117	228	114	318	111	456	108	552	108	40°
			0.04	90	141	156	137	228	134	318	130	450	131	552	131	
			0.06	78	175	144	171	222	166	312	164	444	163	546	163	
			0.08	66	206	138	206	210	202	306	199	438	195	546	195	
	600	1.4	0.03	114	139	192	136	276	134	390	130	552	126	672	125	40°
			0.04	102	165	186	162	270	158	384	155	546	149	666	148	
			0.06	90	203	174	201	264	199	378	197	540	194	660	193	
			0.08	72	239	156	236	258	234	372	230	534	226	660	225	
	750	1.6	0.03	138	160	240	159	336	155	474	153	672	148	822	146	40°
			0.04	132	192	234	189	330	187	474	184	672	179	822	177	
			0.06	108	241	216	237	324	234	468	231	666	227	816	226	
			0.08	84	295	198	291	312	286	462	281	660	275	810	273	
	1000	3.0	0.03	204	194	306	192	444	191	630	190	888	186	1080	184	40°
			0.04	198	224	300	223	444	222	630	222	888	220	1080	220	
			0.06	180	287	288	285	432	284	624	283	876	280	1074	280	
			0.08	162	341	276	337	426	336	618	334	870	333	1074	333	

●Performance data

Characteristic curves

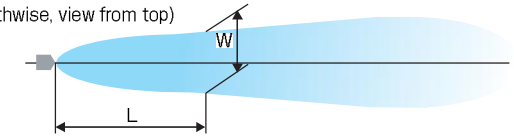
Nozzle model number KAML500



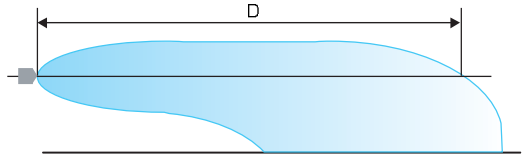
Spray patterns

Nozzle model number KAML500

(Widthwise, view from top)

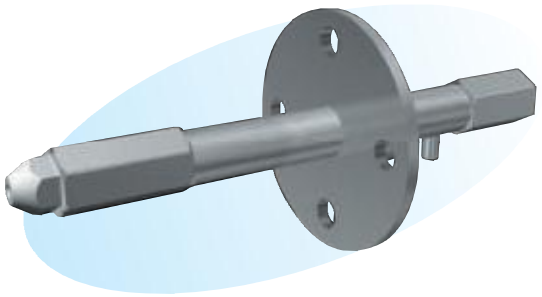


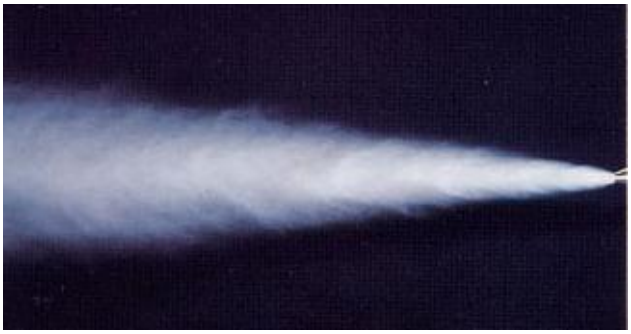
(Thicknesswise, view from side)



Air flow rate (m³/h (Nor.))	Water flow rate (ℓ/h)	Air-water volume ratio	Spray pattern value			
			D (mm)	W (mm) at L (mm)		
				1000	2000	3000
75	200	375	5500	450	600	700
75	100	750	5000	420	550	700
125	300	417	6000	470	650	750
125	100	1250	5500	450	600	700
150	400	375	6000	500	700	800
150	200	750	5500	450	650	750
250	600	417	6000	600	800	900
250	200	1250	6000	550	750	850

KAM Nozzles (to Cool Gases) Single Mist





▸ Features

- Easy to maintain.
- Large orifice diameter for cooling water.

▸ Applications

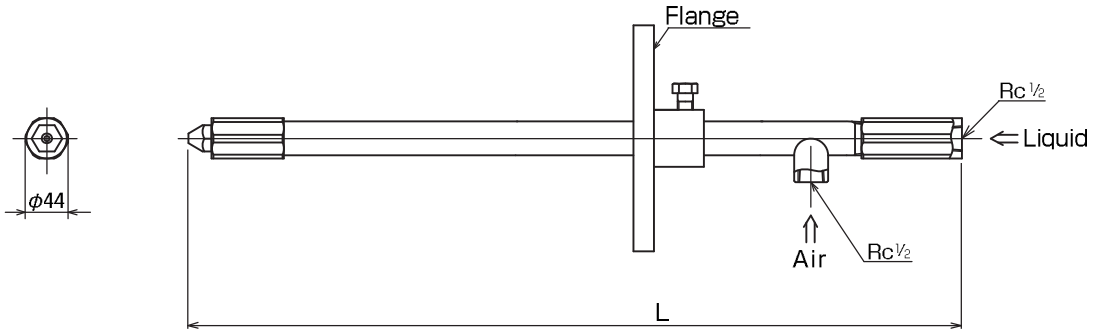
- Exhaust gas cooling in waste incineration plants and desuperheating tower.
- Atomizing of lime hydrate slurry.

▸ Materials

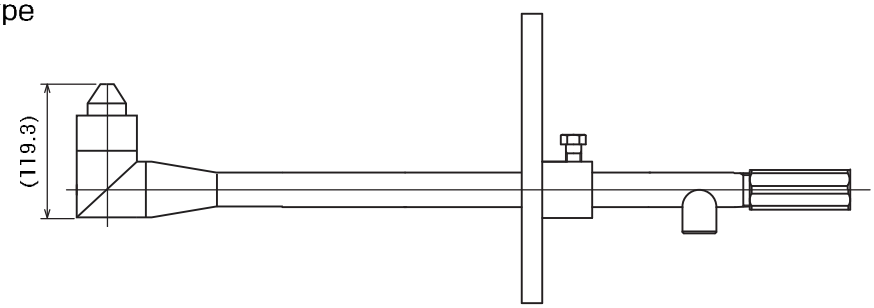
- Standard material: SUS316L (principal parts)

Shapes and dimensions

● Straight type



● Elbow type



NPT thread is also available.

※Dimension L and flange size are to be specified by the customer.

●Model and Model Number representing

KAM 700S
Model number

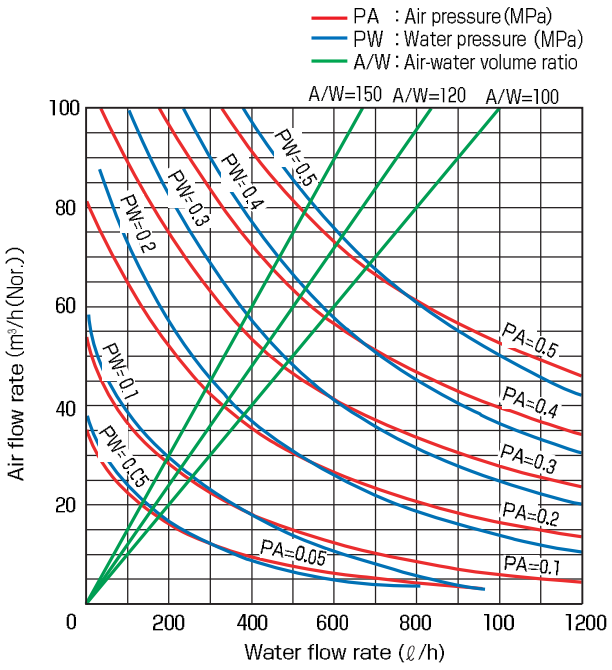
●Standard type model number list

Model	Model number	Minimum orifice diameter for liquid (mm)	Air-water volume ratio	Water flow rate (ℓ/h) at following water pressure (MPa)			
				0.2	0.3	0.4	0.5
KAM	360S	4.5	100	230	290	350	410
			150	180	230	280	320
			200	150	190	230	280
	600S	7.5	100	370	480	580	680
			150	290	370	440	530
			200	240	300	370	430
	700S	8.2	100	440	560	680	800
			150	350	440	540	620
			200	290	370	440	530
	850S	8.7	100	540	700	850	1000
			150	420	550	670	780
			200	350	460	560	660
	1000S	10.0	100	660	770	990	1160
			150	530	650	780	900
			200	440	540	650	770
	1150S	11.4	100	740	940	1150	1370
			150	580	740	890	1080
			200	480	600	740	890

●Performance data

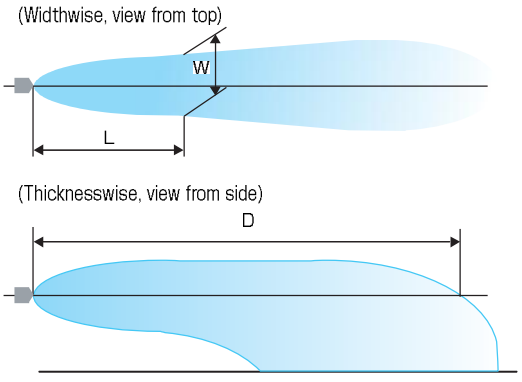
Characteristic curves

Nozzle model number KAM600S



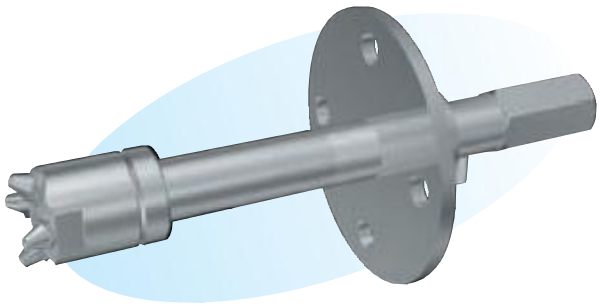
Spray patterns

Nozzle model number KAM700S



Air flow rate (m³/h (Nor.))	Water flow rate (ℓ/h)	Air-water volume ratio	Spray pattern value		
			D	L	W
50	500	100	8000	500	200
				1000	300
				2000	600
				3000	800

KAM Nozzles (to Cool Gases) Multi-mist Series



▶ Features

- Multi-nozzle head construction to produce a stable mist with variable angle of 40° to 50°.

▶ Applications

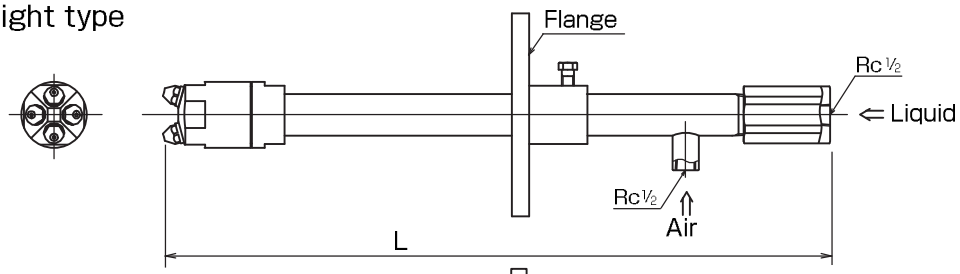
- Exhaust gas cooling in refuse incineration plants and desuperheating tower.

▶ Material

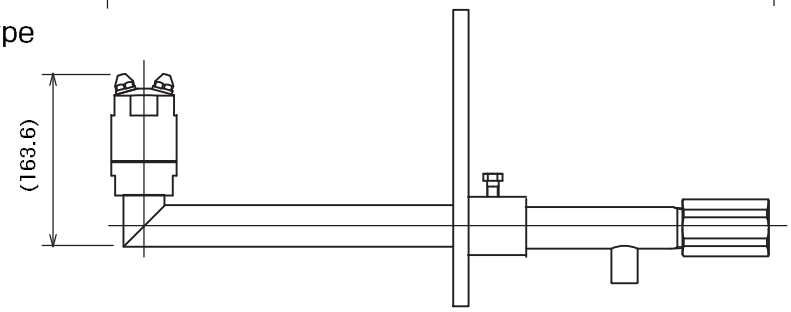
- Standard material: SUS316L (principal parts)

Shapes and dimensions

● Straight type



● Elbow type



NPT thread is also available.

※Dimension L and flange size are to be specified by the customer.

●Model and Model Number representing KAM 125S×4

Model number

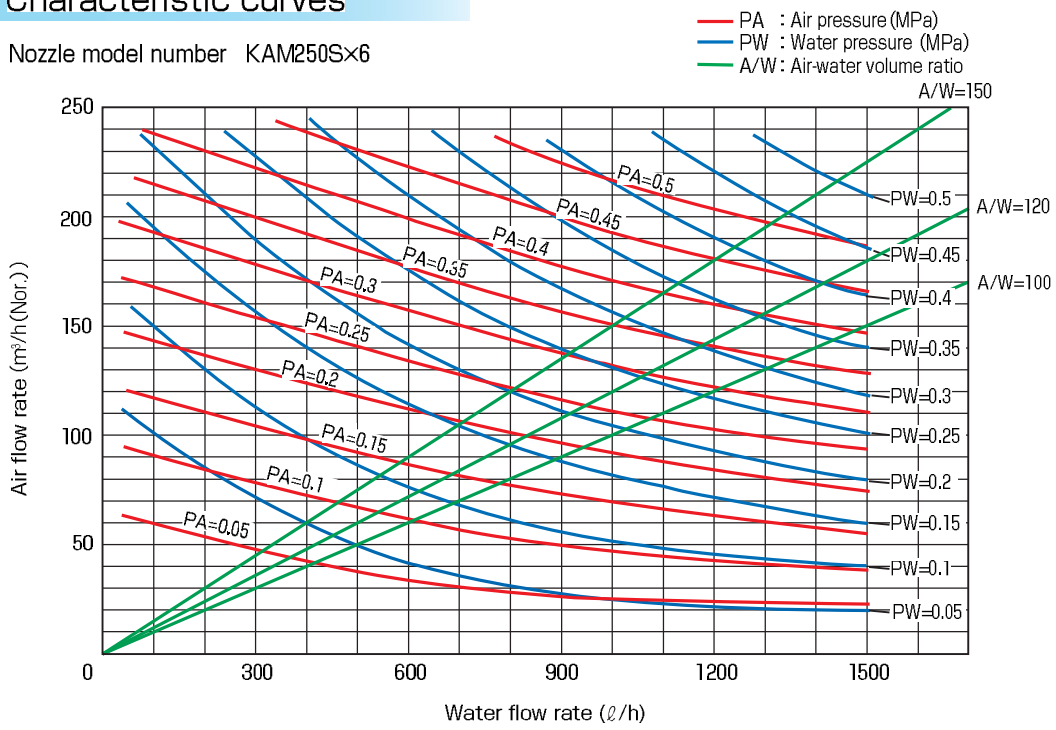
●Standard type model number list

Model	Model number	Minimum orifice diameter for liquid (mm)	Air-water volume ratio	Water flow rate (ℓ/h) at following water pressure (MPa)			
				0.1	0.2	0.3	0.4
KAM	65 SX4	2.7	100	130	170	220	260
			150	100	140	170	200
			200	80	110	140	170
	125 SX4	3.4	100	220	320	410	480
			150	170	240	310	370
			200	130	200	250	310
	240 SX4	4.4	100	440	640	820	980
			150	350	490	640	780
			200	290	420	530	650
	250 SX6	4.7	100	680	1030	1300	1590
			150	540	800	1020	1240
			200	460	670	860	1040

●Performance data

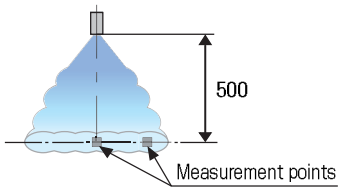
Characteristic curves

Nozzle model number KAM250S×6



Measurement of particle size

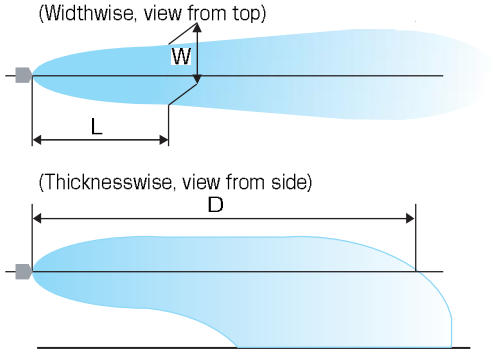
Nozzle model number KAM125S×4



Air pressure (MPa)	Water pressure (MPa)	Air flow rate (m³/h (Nor.))	Water flow rate (ℓ/h)	Air-water volume ratio	Mean particle size SMD(μm)		Mean flow velocity (m/s)	
					Center	Periphery	Center	Periphery
0.370	0.330	51.0	340	150	45.9	39.6	7.8	19.5
0.339	0.300		280	182	45.8	36.9	7.3	19.5
0.298	0.258		197	259	40.7	32.8	7.0	16.4

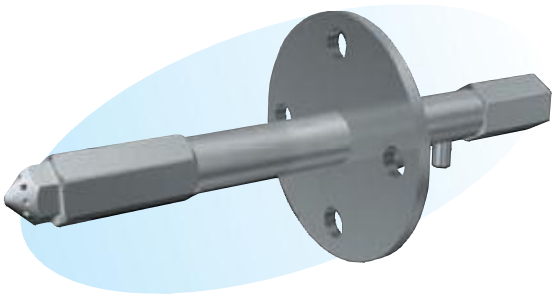
Spray pattern

Nozzle model number KAM125S×4



Air pressure (MPa)	Water pressure (MPa)	Air flow rate (m³/h (Nor.))	Water flow rate (ℓ/h)	Air-water volume ratio	Spray pattern value		
					D (mm)	L (mm)	W (mm)
0.370	0.330	51.0	340	150	6500	500	350
						1000	600
						1500	900
						2000	1100
0.339	0.300		280	182	6500	500	350
						1000	600
						1500	900
						2000	1100
0.298	0.258		197	259	6500	500	350
						1000	600
						1500	900
						2000	1100

KAM Nozzles (to Cool Gases) Wide-angle Mist Series



▸ Features

- Spray angle capacity: 40° to 80°.
- Wide-area cooling.

▸ Applications

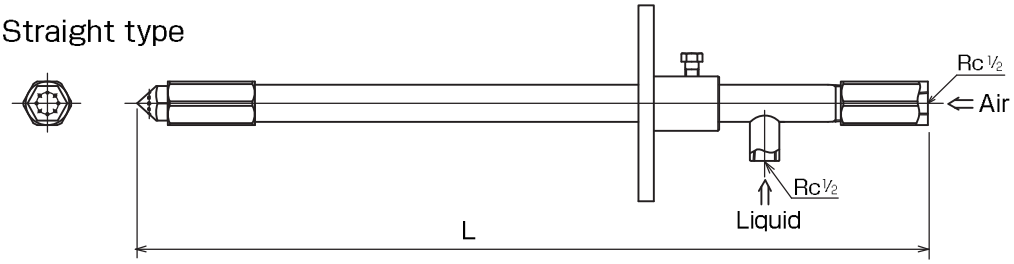
- Exhaust gas cooling in refuse incineration plants and desuperheating tower.

▸ Material

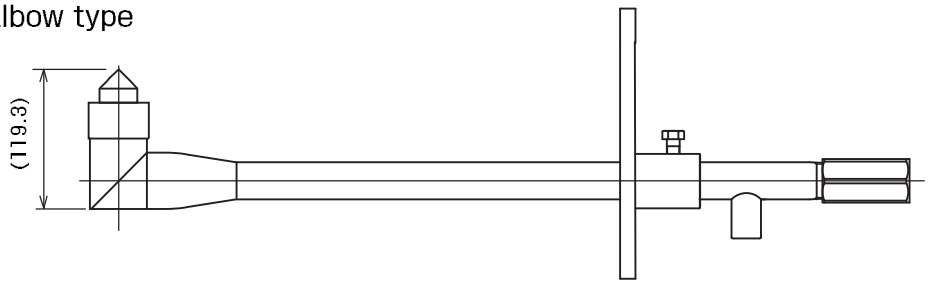
- Standard material: SUS316L (principal parts)

Shapes and dimensions

● Straight type



● Elbow type



NPT thread is also available.

●Model and Model Number representing KAM 27×8−70

Model number

●Standard type model number list

Model	Model number	Minimum orifice diameter for liquid (mm)	Air-water volume ratio	Water flow rate (ℓ/h) at following water pressure (MPa)			
				0.1	0.2	0.3	0.4
KAM	27×8-70	2.7	100	210	310	400	470
			150	170	250	320	380
			200	130	200	260	320
	40×8-70	4.0	100	470	680	860	1040
			150	360	530	680	830
			200	300	440	560	710
	50×8-70	5.0	100	600	890	1140	1390
			150	470	700	910	1100
			200	400	580	760	930