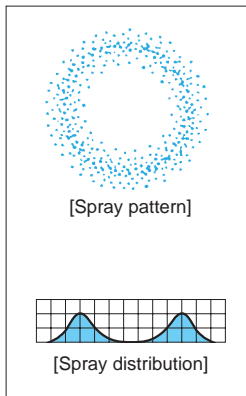


Extremely Fine Fog and Ultra-low Flow Rate Hollow Cone Spray Nozzles

KB

Hollow Cone



- Ultra-low flow rate hollow cone spray nozzle with the finest atomization among hydraulic nozzles.
- Capable of generating an extremely fine spray.
- The whirl chamber is formed by a ceramic orifice and closer,¹ which provides excellent wear resistance.

[STANDARD PRESSURE]
0.7 MPa

[APPLICATIONS]

Humidifying: Air handling units, greenhouses
Cooling: Gas, thin plates, poultry
Spraying: Alcohol, chemicals

Structure	<ul style="list-style-type: none"> • Nozzle orifice and closer are made of ceramics.¹ • Male parallel pipe thread (G1/4B). • All models include a built-in strainer. • It can accommodate an optional check valve.
Material	<ul style="list-style-type: none"> • Nozzle orifice & closer: ceramic¹ • Metal parts: S303 or B (brass)

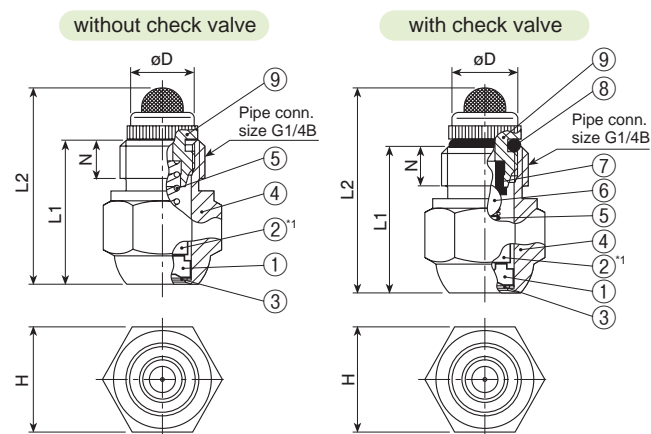
Series	Dimensions (mm)					Weight (g)	
	L1	L2	H	øD	N	S303	B
KB (w/o check valve)	22.5	31	17 (S303) 16 (B)	10.5	6	24.8	25
KB+CV (w/ check valve)	22.5	32	17 (S303) 16 (B)	10.5	6	25.3	25.5

*1) For KB nozzles with N in the spray capacity code (page 53), the closer is made of polyester elastomer instead of ceramic.

[Note]

1. Appearance and dimensions may differ slightly depending on material and nozzle code.
2. An O-ring is required for connecting to a pipe. If used at high pressure, an adaptor is also required. Both are available as option.

DRAWING



- ① Ceramic orifice ② Ceramic closer^{*1} ③ Packing (PTFE) ④ Nozzle body
- ⑤ Spring ⑥ Ball (S304) ⑦ Packing (NBR) ⑧ O-ring (NBR)
- ⑨ Strainer (S303+S304 or B+S304 for mesh size #100, S304+S316 or B+S304+S316 for mesh size #150, #200)

Spray angle code	Spray capacity code ^{*2}	Spray angle (°)			Spray capacity (L/hr) ^{*3}										Mean drop. dia. (µm)	Free pass. dia. (mm)	Strainer mesh size
		0.3 MPa	0.7 MPa	2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	1 MPa	1.2 MPa	1.5 MPa	2 MPa				
80	063N	65	80	80	1.36	1.55	1.72	1.86	2.00	2.35	2.56	2.83	3.22	45	0.20	200	
	071	—	80	80	—	1.70	1.90	2.08	2.25	2.69	2.95	3.29	3.81				
	08	—	80	80	—	1.97	2.20	2.41	2.60	3.11	3.40	3.80	4.40	}	0.15	200	
	09	—	80	80	—	2.23	2.49	2.73	2.95	3.53	3.86	4.32	4.99				
	10N	65	80	80	2.19	2.51	2.78	3.03	3.25	3.84	4.18	4.63	5.30	}	0.25	200	
	125N	65	80	80	2.77	3.16	3.51	3.82	4.10	4.84	5.27	5.84	6.68				60
	14	—	80	80	—	3.48	3.89	4.26	4.60	5.50	6.02	6.73	7.78	50	0.15	200	
	16N	65	80	80	3.51	4.02	4.47	4.88	5.25	6.22	6.79	7.55	8.66				}
	20N	65	80	80	4.41	5.06	5.62	6.13	6.60	7.82	8.53	9.49	10.9	}	0.40	150	
	22N	65	80	80	4.84	5.55	6.18	6.74	7.25	8.59	9.37	10.4	12.0				}
	25	70	80	80	5.40	6.24	6.97	7.64	8.25	9.87	10.8	12.1	14.0	}	0.25	150	
	28	70	80	80	6.05	6.99	7.82	8.56	9.25	11.1	12.1	13.5	15.7				}
	32	70	80	80	6.94	8.01	8.96	9.82	10.6	12.7	13.9	15.5	17.9	75	0.30	150	
	38	70	80	80	8.25	9.52	10.7	11.7	12.6	15.1	16.5	18.4	21.3				65
	45	70	80	80	9.79	11.3	12.6	13.9	15.0	17.9	19.6	21.9	25.3	}	0.40	100	
	50	70	80	80	10.9	12.6	14.0	15.4	16.6	19.9	21.8	24.3	28.1				}
	56	70	80	80	12.2	14.1	15.7	17.2	18.6	22.3	24.4	27.2	31.5	}	0.40	100	
	63	72	80	80	13.7	15.8	17.7	19.4	21.0	25.1	27.5	30.7	35.5				}
	71	72	80	80	15.5	17.8	20.0	21.9	23.6	28.2	30.9	34.6	39.9	}	0.50	100	
	80	72	80	80	17.5	20.2	22.6	24.7	26.7	31.9	35.0	39.0	45.1				}
90	73	80	80	19.6	22.7	25.4	27.8	30.0	35.9	39.3	43.9	50.8	110	0.50	100		
100	73	80	80	21.8	25.2	28.2	30.9	33.3	39.9	43.7	48.8	56.4				90	0.50
1250	73	80	80	27.2	31.5	35.2	38.5	41.6	49.8	54.5	60.9	70.4	}	0.50	100		
180	74	80	80	39.2	45.3	50.6	55.5	59.9	71.6	78.5	87.6	101				}	0.60
200	74	80	80	43.6	50.4	56.3	61.7	66.6	79.7	87.3	97.5	113	}	0.60	100		
320	75	80	80	69.7	80.5	90.0	98.6	107	127	140	156	180				210	0.60
60	063	—	60	60	—	1.51	1.69	1.85	2.00	2.39	2.62	2.93	3.38	45	0.15		
	14	—	60	60	—	3.48	3.89	4.26	4.60	5.50	6.02	6.73	7.78				
	32	—	60	60	—	8.01	8.96	9.82	10.6	12.7	13.9	15.5	17.9	}	0.30	150	
	56	50	60	60	12.2	14.1	15.7	17.2	18.6	22.3	24.4	27.2	31.5				
	140	53	60	60	30.5	35.2	39.4	43.2	46.6	55.7	61.0	68.2	78.8	130	0.50	100	
	280	54	60	60	61.0	70.5	78.8	86.4	93.2	112	122	136	158				

*2) The KB series nozzles with "N" in the spray capacity code can be used at a pressures of 0.2 to 10 MPa. See the next page for more features and information.

*3) The spray capacity of KB series is listed in liters per hour (L/hr), not in L/min. The spray capacity code does not correspond with the spray capacity at standard pressure.

Features of the KB series, identified with "N" in the spray capacity code

● Anti-clogging design

- It features a larger orifice diameter, about 1.3–2.6 times the size compared to the conventional KB models, making it clog-resistant.

● Available for a wide range of pressures, from low (0.2 MPa) to high (10 MPa)

- Capable of spraying from 0.2 MPa, for a low spray capacity.
- Also designed to withstand pressures of up to 10 MPa, making it suitable for finer atomization.⁴

*4) When spraying at pressures of 2 MPa or higher, use S303 nozzles.

■ Spray capacity (at 0.2 MPa and 3–10 MPa)

Spray angle code	Spray capacity code	Spray capacity (L/hr)						Mean drop. dia. at 10 MPa (μm)
		0.2 MPa	3 MPa	5 MPa	6 MPa	7 MPa	10 MPa	
80	063N	1.13	3.88	4.89	5.31	5.70	6.70	33
	10N	1.82	6.40	8.11	8.83	9.48	11.2	
	125N	2.29	8.07	10.2	11.1	12.0	14.1	
	16N	2.89	10.5	13.4	14.6	15.7	18.6	
	20N	3.64	13.2	16.8	18.4	19.8	23.4	40
	22N	3.99	14.5	18.5	20.2	21.7	25.7	

Check Valve (Option)

To avoid any dripping after shut-off, the KB series nozzles are available with an optional built-in ball check valve. The standard operating pressure for check valves is 0.4 MPa. Supply pressure minus the operating pressure of the check valve (0.4 MPa) is the atomizing pressure. KB series nozzles with check valves are not guaranteed for spray angle and spray capacity.

HOW TO ORDER


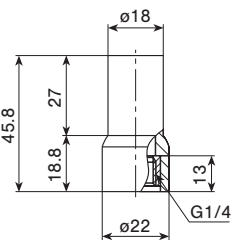

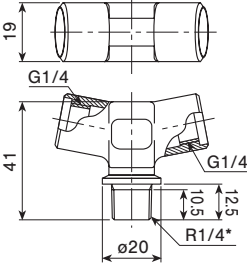

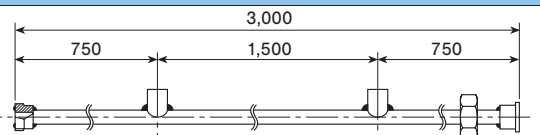
To inquire about or order a specific nozzle please refer to this coding system.

Example: 1/4M KB 80071 S303 CV -RW

1/4M KB	80	071	S303	CV	-RW
Pipe conn. size ⁵	Spray angle code	Spray capacity code	Material	Check valve	Strainer
	80 60	063N ∩ 320	S303 B	CV (with check valve) (Blank indicates "without check valve")	

*5) "M" indicates male parallel pipe thread ("G" of the ISO standard) in the KB series.

Optional Accessories for KB series

Product	Picture	Structure (unit: mm)	Features
Fitting for PVC Pipe 13AKB Adaptor			<ul style="list-style-type: none"> Fitting for KB series nozzle to 13A (1/2") Tee connectors. Material: PVC
Two-way Adaptor			<ul style="list-style-type: none"> Adaptor for connecting 2 pcs. of KB series nozzles. Material: chrome-plated brass <p>*Two types of threads for pipe connection are available: male tapered thread or male parallel thread.</p>
Spray Header			<ul style="list-style-type: none"> Stainless steel header with two-way adaptors. Length of header: 3 m or 4 m <p>Please contact us for details.</p>