

Kingspray 552 plastic/pvdf nozzles

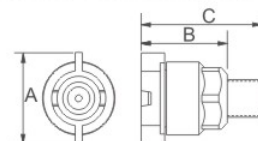


// Features

- Full cone spray.
- Unibody design allows for secure and easy installation, and X-shaped core provides minimal clogging. It is often used in etching and developing processes for semiconductors and printed circuit boards that require high spray uniformity.
- Two piece nozzle design which includes nozzle and the base allows quick and accurate installation by hand. It is convenient for on-site management. Nozzle tip is secured into the base and fastened by three buckle points to avoid the nozzle tip loosening and ensure the performance quality.
- Internal gaskets are available in various options such as EPDM, Viton, and FEPM, which can be adapted to various types of chemical processes. The special structural design allows the nozzles to closely contact the base to prevent water leakage.
- According to the working environment, the base has two choices of thread type and welding type.

// Applications

- Cleaning: Gas, exhaust gas, dust, cleaning device, tank cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals, dust suppression.



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
Plastic	1/8QFF	32	28	39	1/8M	17.5
	1/4QFF	32	28	43	1/4M	17.9
	3/8QFF	32	28	43	3/8M	19.6

// Material

- TIP: PVDF
- Core: PP, PVDF
- O-ring: EPDM, VITON, FEPM
- Base: PVDF, PP, U-PVC

How to place an order for Mid-crown nozzles?

Example:	1/4	BSPT	QFF	030	PVDF
	Thread Size	Thread Type	Nozzle Series	Capacity Code	Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 90° and 120° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.7 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	4 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²	10 kgf/cm ²	15 kgf/cm ²			
50°~90°	010	0.59	0.71	0.87	1.00	1.41	1.73	2.00	2.24	2.74	230	0.7	100
	015	0.89	1.06	1.30	1.50	2.12	2.60	3.00	3.35	4.11		1	-
	020	1.18	1.41	1.73	2.00	2.83	3.46	4.00	4.47	5.48	270	1.3	-
	025	1.48	1.77	2.17	2.50	3.54	4.33	5.00	5.59	6.85		1.4	-
	030	1.77	2.12	2.60	3.00	4.24	5.20	6.00	6.71	8.22		15	-
	035	2.07	2.47	3.03	3.50	4.95	6.06	7.00	7.83	9.59		1.6	-
	040	2.37	2.83	3.46	4.00	5.66	6.93	8.00	8.94	10.95		1.7	-
	045	2.66	3.18	3.90	4.50	6.36	7.79	9.00	10.06	12.32	400	1.7	-
	050	2.96	3.54	4.33	5.00	7.07	8.66	10.00	11.18	13.69		1.7	-
	055	3.25	3.89	4.76	5.50	7.78	9.53	11.00	12.30	15.06		1.7	-

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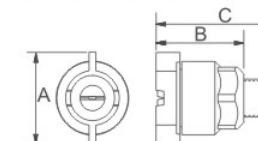


// Features

- The spraying type is fan type, and the spray shape is single line and two sides are tapered (tapered edge), which presents a bell curve shape flow field distribution with weaker ends compared to the middle. Products with special flow field distribution can be customized.
- Two-piece quick-release design is divided into two parts: the nozzle and the body. It can be installed and removed without any tools. It is convenient for on-site operation. With three positioning buckle points, the nozzle can be accurately screwed in and positioned to avoid loose nozzles and to ensure the quality of production.
- The internal gaskets have different options such as EPDM, Viton and FEPM, which can be adapted to various chemical processes. With a special structural design, the nozzles and the base can be closely fitted to avoid water leakage.
- PVDF is resistant to temperature and corrosive chemical solutions.
- According to the working environment, the body has two choices of thread type and welding type.

// Applications

- Cleaning: Vehicles, Containers, Filters, Dust, Gravel, Metals, Metal Parts, Machinery, Steel Plates, Various Containers, High Pressure Cleaning, Wet Processing, Display Pane, machine tool cleaning, etc.
- Cooling: Gas, tank, machinery, metal, roof, etc.
- Dispersion: Humidifying, chemicals (etching solution, Lubrication fluid, insect repellent fluid, etc.), Water Curtain (fire protection, dust prevention, deodorization, etc.).



Appearance dimensions may vary depending on model, material. Please ask for details.

Material	Serie	Unit (mm)			Thread Type	Weight (g) PVDF
		A	B	C		
Plastic	1/8QFH	32	28	39	1/8M	17.2
	1/4QFH	32	28	43	1/4M	17.6
	3/8QFH	32	28	43	3/8M	19.3

// Material

- TIP: PVDF
- O-ring: EPDM, VITON, FEPM
- Base: PVDF, PP, UPVC

How to place an order for Mid-crown nozzles?

Example:	1/8	BSPT	QFH	02	90	PVDF
	Thread Size	Thread Type	Nozzle Series	Capacity Code	Spray Angle	Material

※ Standard Pressure: Column in red.
 ※ This product for spray angle 0°, 15°, 25°, 40°, 50°, 100° and 110° is able to be made to order.

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm ²	1 kgf/cm ²	1.5 kgf/cm ²	2 kgf/cm ²	3 kgf/cm ²	4 kgf/cm ²	5 kgf/cm ²	6 kgf/cm ²	8 kgf/cm ²			
0°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.68	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-

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Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²	6 kgf/cm²	8 kgf/cm²			
0°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.68	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
15°	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
25°	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

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Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²	6 kgf/cm²	8 kgf/cm²			
40°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.17	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
50°	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
65°	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-
	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.4	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.6	100
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.7	100
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.8	50
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.9	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	230	0.9	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	1.0	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	1.0	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.1	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.1	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.2	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	370	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	2.0	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.3	-

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Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²	6 kgf/cm²	8 kgf/cm²			
80°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.6	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	220	0.7	50
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	0.7	50
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.9	50
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.9	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	1.0	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	1.0	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.1	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.3	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.4	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	340	1.6	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.9	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	2.1	-
90°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	0.3	150
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	0.4	150
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	0.4	150
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	0.5	100
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	0.5	100
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	210	0.5	100
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	0.6	100
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	0.8	50
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	330	0.8	50
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	0.8	50
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	1.0	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	1.1	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	1.2	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	1.4	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	1.6	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	1.8	-
100°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-

Kingspray 552 plastic/pvdf nozzles

Spray Angle	Capacity Code	Capacity at Pressure									Average particle size (um)	Min. Free Passage (mm)	Filter mesh
		0.5 kgf/cm²	1 kgf/cm²	1.5 kgf/cm²	2 kgf/cm²	3 kgf/cm²	4 kgf/cm²	5 kgf/cm²	6 kgf/cm²	8 kgf/cm²			
110°	2	0.32	0.45	0.55	0.64	0.78	0.90	1.01	1.11	1.28	-	-	-
	2.5	0.40	0.56	0.69	0.80	0.98	1.13	1.26	1.38	1.60	-	-	-
	3	0.48	0.68	0.83	0.96	1.17	1.35	1.51	1.66	1.92	-	-	-
	4	0.64	0.90	1.11	1.28	1.56	1.81	2.02	2.21	2.55	-	-	-
	5	0.80	1.13	1.38	1.60	1.96	2.26	2.52	2.76	3.19	-	-	-
	6	0.96	1.35	1.66	1.92	2.35	2.71	3.03	3.32	3.83	-	-	-
	7	1.12	1.58	1.94	2.23	2.74	3.16	3.53	3.87	4.47	-	-	-
	7.5	1.20	1.69	2.07	2.39	2.93	3.39	3.79	4.15	4.79	-	-	-
	8	1.28	1.81	2.21	2.55	3.13	3.61	4.04	4.42	5.11	-	-	-
	9	1.44	2.03	2.49	2.87	3.52	4.06	4.54	4.98	5.75	-	-	-
	10	1.60	2.26	2.76	3.19	3.91	4.51	5.05	5.53	6.39	-	-	-
	12.5	2.00	2.82	3.46	3.99	4.89	5.64	6.31	6.91	7.98	-	-	-
	15	2.39	3.39	4.15	4.79	5.87	6.77	7.57	8.29	9.58	-	-	-
	20	3.19	4.51	5.53	6.39	7.82	9.03	10.10	11.06	12.77	-	-	-
	25	3.99	5.64	6.91	7.98	9.78	11.29	12.62	13.82	15.96	-	-	-
	30	4.79	6.77	8.29	9.58	11.73	13.54	15.14	16.59	19.16	-	-	-