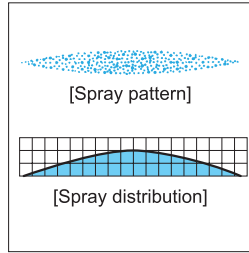


# Three-piece Structure Standard Flat Spray Nozzles

VV/V

Flat Spray



**[Features]**

- Flat spray pattern with a mountain-shaped spray distribution having gradually tapered edges.
- Tapered edges overlap to provide uniformity of spray distribution in multiple-nozzle arrangements.

**[Standard pressure]**

0,3 MPa

**[Applications]**

Cleaning: Automotives, containers, films, felts, filters, screens, bottles, crushed stones, earth and sand, metal parts, machines, steel plates and pieces

Spraying: Etchants, oils, lubricants, glues, solutions, insecticides, herbicides

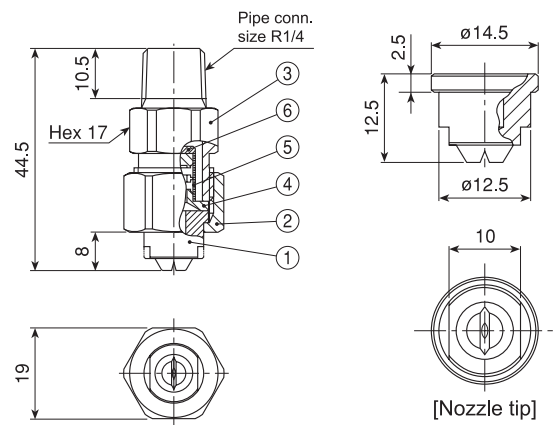
Cooling: Gas, smokes, heat exchangers, tanks, steels, roofs

Water screen: Fire protection, heat protection, dust suppression, deodorization

## VV series

VV series	
Structure	<ul style="list-style-type: none"> <li>• Made of metal, three-piece structure.</li> <li>• Comprises three parts: Nozzle tip, cap, and adaptor. Worn-out nozzle tip can be replaced separately.</li> <li>• Small spray capacity models come with or without a removable strainer.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• S303 or B (brass)</li> <li>• Optional material: S316 or others</li> </ul>
Mass	<ul style="list-style-type: none"> <li>• Complete assemblies* S303: 56 g, B (brass): 60 g</li> <li>• Nozzle tip S303: 13 g, B (brass): 14 g</li> </ul>

\*When with a strainer, add 2–5 g to the above mass and 2 mm to the total length.  
[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.

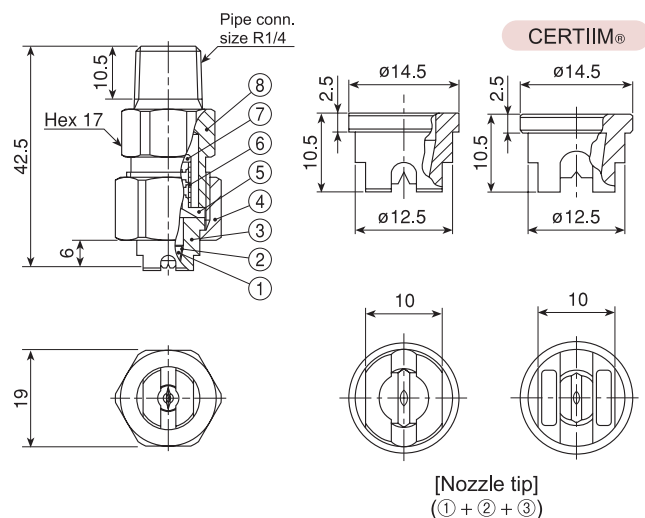


- A Nozzle** (① Nozzle tip ② Cap ③ Adaptor)  
**B Strainer** (④ Strainer holder ⑤ Strainer screen [S316] ⑥ Strainer cap)

## V series

V series (with ceramic orifice inserted)	
Structure	<ul style="list-style-type: none"> <li>• Three-piece structure with ceramic orifice inserted.</li> <li>• Comprises three parts: Nozzle tip, cap, and adaptor. Worn-out nozzle tip can be replaced separately.</li> <li>• Small spray capacity models come with or without a removable strainer.</li> <li>• CERTIIM® is one-shot injection molded nozzle tip created by molding the precision-made ceramic orifice into a plastic retainer.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle orifice: ceramic</li> <li>• Tip retainer: S303, B (brass), or PVDF</li> <li>• Cap, Adaptor, and Strainer: S303 or B (brass)</li> <li>• Optional material: S316 or others</li> </ul>
Mass	<ul style="list-style-type: none"> <li>• Complete assemblies* S303: 49 g, B (brass): 53 g</li> <li>• Nozzle tip S303: 6.5 g, B (brass): 7 g CERTIIM®: 2 g</li> </ul>

\*When with a strainer, add 2–5 g to the above mass and 2 mm to the total length.  
[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.



- A Nozzle** (① Ceramic orifice ② Adhesive: Araldite® ③ Tip retainer) (④ Cap ⑧ Adaptor)  
**B Strainer** (⑤ Strainer holder ⑥ Strainer screen [S316] ⑦ Strainer cap)



## Three-piece Structure Standard Flat Spray Nozzles VV/V series

Flat Spray

Spray angle code	Spray capacity code	VV			V			Spray angle (°)			Spray capacity (ℓ/min)						Mean drop. dia. (μm)	Free pass. dia. (mm)	Strainer mesh size
		All metal	Metal	CER-TIIM <sup>®</sup>	0.15 MPa	0.3 MPa	0.7 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa	0.7 MPa	1 MPa	2 MPa			
40	05	●			30	40	48	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	230	0.4	150
	07	●			30	40	48	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	∫	0.5	100
	10	●			31	40	47	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.7	50
	20	○			32	40	46	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	380	1.0	—
	30	○			33	40	46	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	∫	1.3	—
	40	○			33	40	45	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	∫	1.5	—
	80	○			34	40	44	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	∫	2.1	—
	120	○			35	40	44	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0	∫	2.8	—
	200	○			35	40	43	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	710	3.5	—
25	05	●			18	25	32	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	270	0.5	100
	07	●			18	25	32	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	∫	0.6	100
	10	●			18	25	32	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.8	50
	15	○			19	25	31	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	440	1.0	—
	30	○			19	25	30	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	∫	1.4	—
	40	○			19	25	30	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	∫	1.7	—
	80	○			20	25	29	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	∫	2.3	—
	200	○			21	25	27	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	850	3.9	—
	15	05	●			9	15	22	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	310	0.5
07		●			9	15	21	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	∫	0.7	50
10		●			9	15	21	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	∫	0.8	50
15		○			10	15	20	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	∫	1.0	—
30		○			10	15	19	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	510	1.5	—
40		○			10	15	19	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	∫	1.7	—
80		○			11	15	18	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	∫	2.4	—
200		○			11	15	17	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	1,000	4.0	—

● : Available with/without strainer    ○ : Available without strainer

### How to order

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

#### ① Complete assemblies

〈Example〉 1/4M VV 11505 S303W

1/4M	VV	115	05	S303	W
Series	Spray angle code	Spray capacity code	Material	Strainer	
■ VV	■ 115	■ 02	■ S303	■ W (with strainer)	
■ V	∫	∫	■ B	■ (Blank denotes "without strainer")	
	■ 15	■ 200			

#### ② Nozzle tip only

〈Example〉 1/4 VV 11505 S303

1/4	VV	115	05	S303
Series	Spray angle code	Spray capacity code	Material	
■ VV	■ 115	■ 02	■ S303	
■ V	∫	∫	■ B	
	■ 15	■ 200	■ TPVDF*	

\*TPVDF is only for V series (PVDF nozzle tip with ceramic orifice).