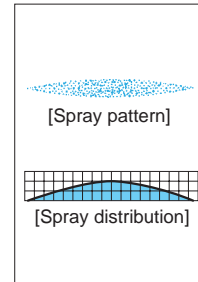


One-piece Structure Standard Flat Spray Nozzles

VVP/VP

Flat Spray



- Flat spray pattern with a mountain-shaped spray distribution and gradually tapered edges.
- Tapered edges overlap to provide uniform spray distribution in multi-nozzle arrangements.

[STANDARD PRESSURE]
0.3 MPa

[APPLICATIONS]

- Cleaning: Automotives, containers, films, felts, filters, screens, bottles, crushed stone, earth and sand, metal parts, machines, steel plates and pieces
- Spraying: Etchants, oils, lubricants, liquids, solutions, insecticides, herbicides
- Cooling: Gas, heat exchangers, tanks, steel, roofs
- Water screen: Fire protection, heat protection, dust suppression, deodorization

VVP SERIES

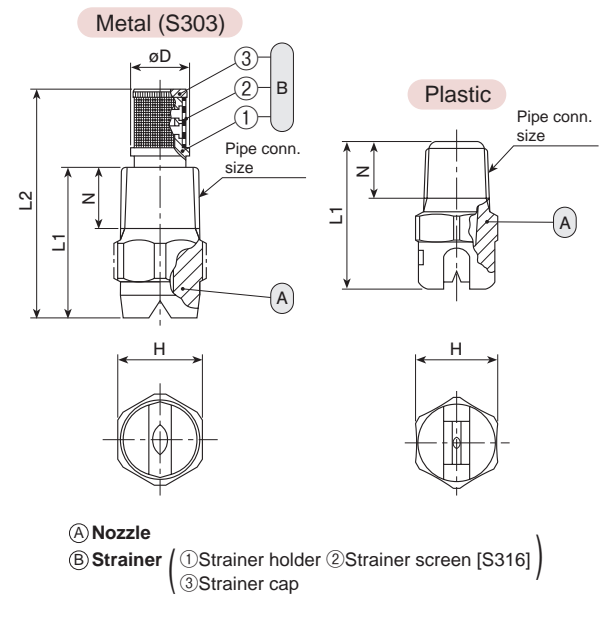
Structure	<ul style="list-style-type: none"> • One-piece structure, made of metal or plastic. • Small spray capacity VVP nozzles made of metal come with or without a strainer.
Material	<ul style="list-style-type: none"> • S303, PP, or PVDF <p>SPECIAL ORDER MATERIAL: S316, PVC, or others</p>

Material	Pipe conn. size	Dimensions (mm)					Weight (g)		
		L1	L2	H	øD	N	S303	PP	PVDF
Metal ^{1,2}	R1/8	18.5	31	12	7.5	6.5	10	-	-
	R1/4	25	40	14	10	10.5	21	-	-
	R3/8	30	-	19	-	10.5	37	-	-
	R1/2	38	-	23	-	14	65	-	-
	R3/4	45	-	29	-	15	110	-	-
Plastic	R1	55	-	35	-	18	170	-	-
	R1/8	22	-	12	-	8.5	-	1.1	2.1
	R1/4	27	-	14	-	11.5	-	2.2	4.3

*1) VVP nozzles with a spray capacity code of 20 or smaller differ in dimension (L1, L2) and shape. Contact us for details.
*2) With a strainer, add 2-5 g to the above weight.

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

DRAWING



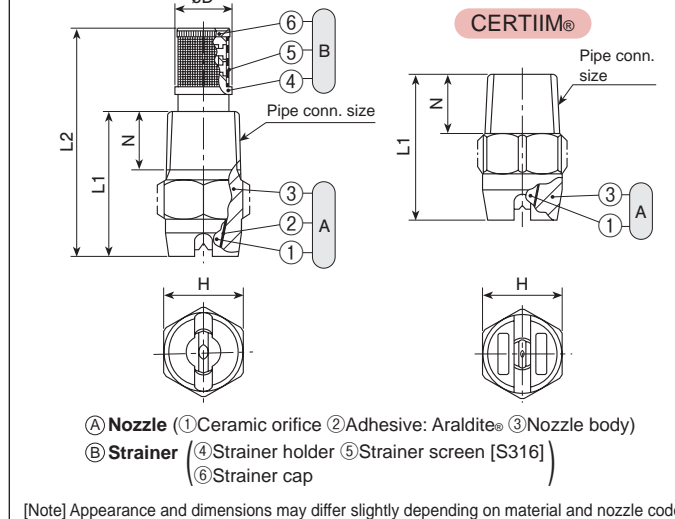
VP SERIES (with ceramic orifice)

Structure	<ul style="list-style-type: none"> • One-piece structure with a ceramic orifice insert. • Small spray capacity VP nozzles made of metal come with or without a strainer. • CERTIIM® is a one-piece plastic nozzle molded around a ceramic orifice.
Material	<ul style="list-style-type: none"> • Nozzle orifice: ceramic • Metal parts: S303 or B (brass) • CERTIIM®'s plastic body: PVDF <p>SPECIAL ORDER MATERIAL: S316 or others</p>

Body material	Pipe conn. size	Dimensions (mm)					Weight (g)		
		L1	L2	H	øD	N	S303	B	CERTIIM®
Metal ²	R1/8	16.5	30	12	7.5	6.5	8	9	-
	R1/4	26	40	14	10	10.5	20	22	-
PVDF (CERTIIM®)	R1/8	22	-	12	-	8.5	-	-	2.1
	R1/4	26	-	14	-	10.5	-	-	6

*2) With a strainer, add 2-5 g to the above weight.

DRAWING



[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

One-piece Structure Standard Flat Spray Nozzles VVP/VP SERIES

Flat Spray

VVP SERIES (S316L-IN)

Precision-manufactured stainless steel VVP nozzle with low flow rate.

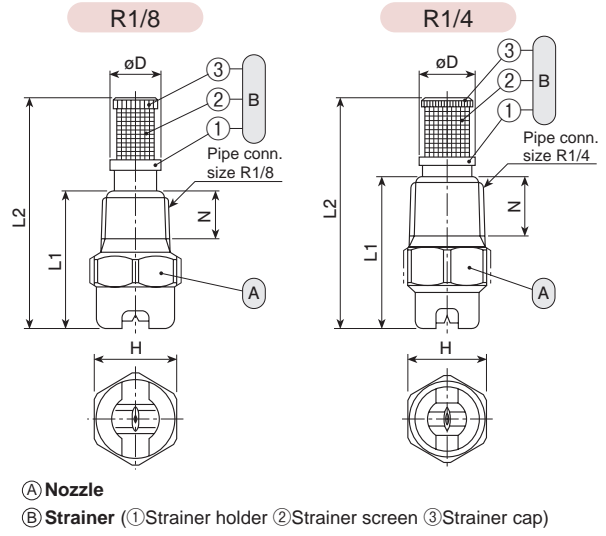
Structure	<ul style="list-style-type: none"> Made of metal. Available with or without a strainer.
Material	<ul style="list-style-type: none"> S316L equivalent Strainer: S303 or S316

Pipe conn. size	Dimensions (mm)					Weight ² (g)
	L1	L2	H	øD	N	
R1/8	20	33.5	12	7.5	7	9.6
R1/4	27	41	14	10	10.5	16

*2) With a strainer, add 2-5 g to the above weight.

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

DRAWING



VVP (S316L-IN) Series, precision stainless steel nozzle with low flow rate

Spray angle code	Spray capacity code	Pipe connection size		Spray angle (°)			Spray capacity (L/min)									Mean drop. dia. (µm)	Free pass. dia. (mm)	Strainer mesh size
		R1/8	R1/4	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			
115	03	●	●	101	115	124	-	-	0.21	0.24	0.30	0.39	0.46	0.55	0.77	140	0.2	200
	04	●	●	102	115	124	-	-	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.2	200	
	05	●	●	102	115	124	-	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.3	150	
	07	●	●	103	115	124	-	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.3	150	
	10	●	●	103	115	124	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	270	0.4	150
90	03	●	●	76	90	100	-	-	0.21	0.24	0.30	0.39	0.46	0.55	0.77	150	0.2	200
	04	●	●	77	90	100	-	-	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.3	150	
	05	●	●	77	90	100	-	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.3	150	
	07	●	●	78	90	100	-	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.4	150	
	10	●	●	78	90	99	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	280	0.5	100
80	07	●	●	68	80	89	-	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	180	0.4	150
	10	●	●	68	80	89	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	290	0.5	100
65	03	●	●	52	65	75	-	-	0.21	0.24	0.30	0.39	0.46	0.55	0.77	160	0.3	150
	04	●	●	52	65	75	-	-	0.28	0.33	0.40	0.52	0.61	0.73	1.03	0.3	150	
	05	●	●	52	65	74	-	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	0.4	150	
	07	●	●	53	65	74	-	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	0.5	100	
	10	●	●	54	65	73	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58	310	0.6	100
50	03	●	●	37	50	63	-	-	0.21	0.24	0.30	0.39	0.46	0.55	0.77	180	0.3	150

●: Available with or without strainer

HOW TO ORDER

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

VVP

Example: 1/4M VVP 11515 S303W

VP

1/4M Pipe conn. size ³ 1/8M ∩ 1M	VVP Series VVP VP	115 Spray angle code 115 ∩ 15	15 Spray capacity code 02 ∩ 1500	S303 Material ⁴ S303 B TPVDF PVDF PP-IN	W Strainer W (with strainer) (Blank indicates "without strainer")
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*3) "M" indicates male thread ("R" of the ISO standard), e.g. 1/4M = R1/4.

*4) TPVDF and B are only for the VP series. PVDF and PP-IN are only for the VVP series.

VVP (S316L-IN)

Example: 1/4M VVP 6507 S316L-IN + WS303

1/4M Pipe conn. size ³ 1/8M ∩ 1/4M	VVP	65 Spray angle code 115 ∩ 50	07 Spray capacity code 03 04 05 07 10	S316L-IN Nozzle material	W Strainer W (with strainer) (Blank indicates "without strainer")	S303 Strainer material S303 S316
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