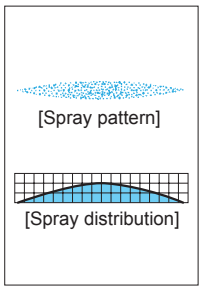
One-piece Structure
Standard Flat Spray Nozzles

Some Models are Made-to-Order

VVP/VP



- 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

Size R1/2 or larger: made-to-order

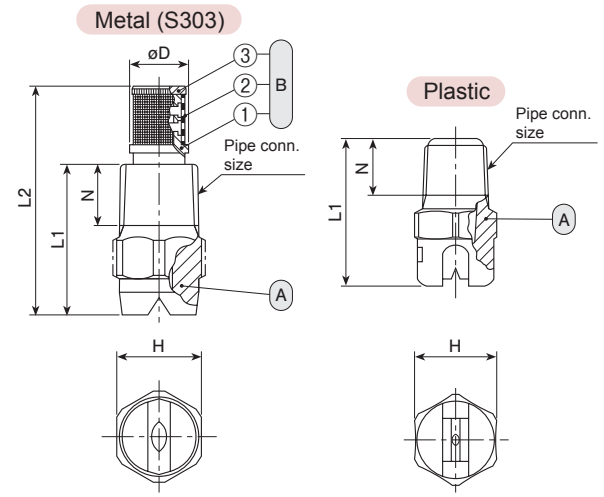
Structure	• One-piece structure, made of metal or plastic. • Small spray capacity VVP nozzles made of metal come with or without a strainer.
Material	• S303, PP, or PVDF SPECIAL ORDER MATERIAL: S316, PVC, or others

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	–	–
	R1	55	–	35	–	18	170	–	–
Plastic	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 strainer, add 2 g for R1/8 and 5 g for R1/4 to the above weight.

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

DRAWING



Ⓐ **Nozzle**
Ⓑ **Strainer** (①Strainer holder ②Strainer screen [S316] ③Strainer cap)

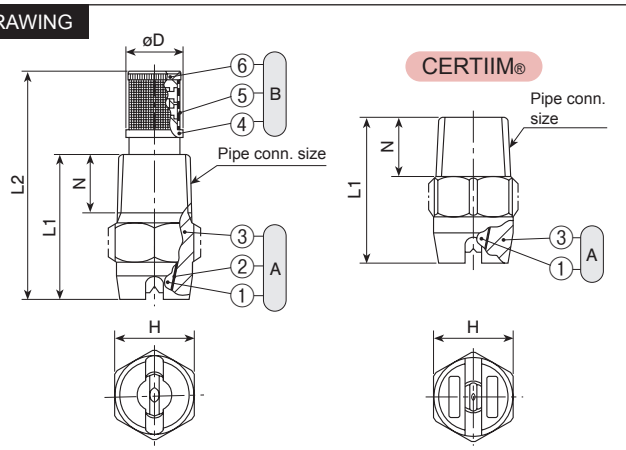
VP SERIES (with ceramic orifice)

Structure	• 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	• Nozzle orifice: ceramic • Metal parts: S303 or B (brass) • CERTIIM's plastic body: PVDF SPECIAL ORDER MATERIAL: S316 or others

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 strainer, add 2 g for R1/8 and 5 g for R1/4 to the above weight.

DRAWING



Ⓐ **Nozzle** (①Ceramic orifice ②Adhesive: Araldite® ③Nozzle body)
Ⓑ **Strainer** (④Strainer holder ⑤Strainer screen [S316] ⑥Strainer cap)

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

■VVP Series, VP Series

Spray angle code	Spray capacity code	Pipe connection size: VVP*3 All metal R1/8	R1/4	R3/8	R1/2	R3/4	R1	VVP All plastic R1/8	R1/4	VP Metal R1/8	R1/4	VP CER-TIIM R1/8	R1/4	Spray angle (°) 0.15 MPa	0.3 MPa	0.7 MPa	Spray capacity (L/min) 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	Mean drop. dia. (μm)	Free pass. dia. (mm)	Strainer mesh size
115	03							○	○	●	●	○	○	101	115	124	–	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	140	0.2	200
	04							○	○	●	●	○	○	102	115	124	–	0.23	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	160	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	≀	0.4	150
	15	●	●					○	○	●	●	○	○	104	115	123	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.5	100
	20	●	●					○	○		●		○	104	115	123	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	270	0.6	100
	30	●	●					○	○		●		○	105	115	122	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		0.8	50
	40	●	●					○	○					106	115	122	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		0.8	50
	60	○	○											107	115	121	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5	≀	1.0	–
	80	○	○											107	115	121	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6		1.2	–
	100		○											107	115	120	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8		1.7	–
	200		○											109	115	120	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	510	2.4	–
	230			○										109	115	119	9.39	13.3	16.3	18.8	23.0	29.7	35.1	42.0	59.4		2.7	–
	260			○										109	115	119	10.6	15.0	18.4	21.2	26.0	33.6	39.7	47.5	67.1	≀	2.8	–
	300			○										109	115	119	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5		3.0	–
	400				○									110	115	118	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103	580	3.5	–
	500				○									110	115	118	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129	≀	3.9	–
	600				○									111	115	118	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155	610	4.3	–
	800					○								111	115	117	32.7	46.2	56.5	65.3	80.0	103	122	146	206	700	5.0	–
	1000					○								111	115	117	40.8	57.7	70.7	81.7	100	129	153	183	258	≀	5.6	–
	1500						○							111	115	117	61.2	86.6	106	122	150	194	229	274	387	900	7.2	–
90	02									●	●	○	○	76	90	100	–	0.12	0.14	0.16	0.20	0.26	0.31	0.37	0.52	145	0.2	200
	03							○	○	●	●	○	○	76	90	100	–	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	150	0.2	200
	04							○	○	●	●	○	○	77	90	100	–	0.23	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	170	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		0.5	100
	15	●	●					○	○		●		○	79	90	99	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	≀	0.6	100
	20	●	●					○	○		●		○	79	90	98	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.7	50
	30	●	●					○	○		●		○	80	90	97	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	280	0.9	50
	40	○	○					○	○		○		○	81	90	97	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		1.1	–
	50	○	○					○	○		○		○	81	90	97	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9		1.2	–
	60	○	○											82	90	96	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5		1.3	–
	80	○	○											82	90	96	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6		1.5	–
	100	○												82	90	96	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8	≀	1.7	–
	120	○												83	90	95	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0		2.0	–
	140		○											83	90	95	5.72	8.08	9.90	11.4	14.0	18.1	21.4	25.6	36.1		2.2	–
	170		○											83	90	95	6.94	9.82	12.0	13.9	17.0	22.0	26.0	31.1	43.9		2.4	–
	200		○											84	90	95	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	540	2.6	–
	230		○											84	90	94	9.39	13.3	16.3	18.8	23.0	29.7	35.1	42.0	59.4		2.8	–
	260		○											84	90	94	10.6	15.0	18.4	21.2	26.0	33.6	39.7	47.5	67.1	≀	3.1	–
	300		○											84	90	94	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5		3.4	–
	400			○										85	90	94	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103	580	3.8	–
	500				○									85	90	93	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129	≀	4.2	–
	600				○									86	90	93	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155		4.7	–
	800				○									86	90	93	32.7	46.2	56.5	65.3	80.0	103	122	146	206	700	5.4	–
	900					○								86	90	92	36.7	52.0	63.6	73.5	90.0	116	137	164	232	750	5.7	–
	1000					○								86	90	92	40.8	57.7	70.7	81.7	100	129	153	183	258	≀	6.0	–
	1200					○								86	90	92	49.0	69.3	84.9	98.0	120	155	183	219	310		6.6	–
	1500						○							86	90	92	61.2	86.6	106	122	150	194	229	274	387	950	7.2	–
80	02									●	●	○	○	67	80	90	–	0.12	0.14	0.16	0.20	0.26	0.31	0.37	0.52	150	0.2	200
	03									●	●	○	○	67	80	90	–	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	≀	0.3	150
	04									●	●	○	○	67	80	90	–	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03		0.3	150
	05	●	●					○	○	●	●	○	○	67	80	90	–	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	180	0.3	150
	07	●								●	●	○	○	68	80	89	–	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		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		0.5	100
	15										●		○	69	80	88	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	≀	0.7	50
	20	●	●								●		○	69	80	88	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		0.8	50
	30	○	○								○		○	70	80	87	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	290	1.0	–
	40	○	○					○	○		○		○	71	80	87	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		1.2	–
	50										○		○	71	80	86	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9		1.4	–
	60										○		○	72	80	86	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5	≀	1.5	–
	80	○	○											72	80	86	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6		1.7	–
	100	○												72	80	85	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8		1.7	–
	120	○												73	80	85	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0		2.1	–
	200		○											74	80	85	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	550	2.9	–
	300		○											74	80	84	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5	570	3.7	–
	400			○										75	80	83	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103	600	4.1	–
	500			○										75	80	83	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129		4.8	–
	600				○									76	80	83	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155	≀	5.1	–
	800				○									76	80	82	32.7	46.2	56.5	65.3	80.0	103	122	146	206		6.1	–
	1000					○								76	80	82	40.8	57.7	70.7	81.7	100	129	153	183	258	850	6.2	–

●: Available with or without strainer ○: Only available without strainer

*3) The VVP series with thread size R1/2 and larger are made-to-order.

Spray angle code	Spray capacity code	Pipe connection size: VVP*3 All metal R1/8	R1/4	R3/8	R1/2	R3/4	R1	VVP All plastic R1/8	R1/4	VP Metal R1/8	R1/4	VP CER-TIIM R1/8	R1/4	Spray angle (°) 0.15 MPa	0.3 MPa	0.7 MPa	Spray capacity (L/min) 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	Mean drop. dia. (μm)	Free pass. dia. (mm)	Strainer mesh size
65	02									●	●	○	○	52	65	75	–	0.12	0.14	0.16	0.20	0.26	0.31	0.37	0.52	155	0.2	200
	03							○	○	●	●	○	○	52	65	75	–	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	160	0.3	150
	04							○	○	●	●	○	○	52	65	75	–	0.23	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	190	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	≀	0.6	100
	15	●	●					○	○		●		○	54	65	73	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		0.8	50
	20	●	●					○	○		●		○	55	65	72	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	310	0.9	50
	30	○	○					○	○		○		○	56	65	72	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.1	–
	40	○	○					○	○		○		○	56	65	71	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		1.3	–
	50	○	○					○	○		○		○	57	65	71	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9		1.5	–
	60	○	○								○		○	57	65	71	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5		1.6	–
	80	○	○					○	○		○		○	58	65	71	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	≀	1.9	–
	100	○												58	65	70	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8		2.1	–
	120	○												58	65	70	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0		2.3	–
	140		○											59	65	69	5.72	8.08	9.90	11.4	14.0	18.1	21.4	25.6	36.1		2.5	–
	170		○											59	65	69	6.94	9.82	12.0	13.9	17.0	22.0	26.0	31.1	43.9		2.8	–
	200		○											59	65	69	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	580	3.0	–
	300		○											60	65	69	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5	650	3.9	–
	400			○										60	65	68	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103		4.7	–
	500			○										61	65	67	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129		5.3	–
	600				○									61	65	67	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155	≀	5.7	–
	800				○									62	65	67	32.7	46.2	56.5	65.3	80.0	103	122	146	206		6.5	–
	1000					○								62	65	66	40.8	57.7	70.7	81.7	100	129	153	183	258		7.3	–
	1500					○								62	65	66	61.2	86.6	106	122	150	194	229	274	387	1,000	9.0	–
50	03										●		○	37	50	60	–	0.17	0.21	0.24	0.30	0.39	0.46	0.55	0.77	180	0.3	150
	04										●		○	37	50	60	–	0.23	0.28	0.33	0.40	0.52	0.61	0.73	1.03	≀	0.4	150
	05	●	●								●		○	38	50	59	–	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	210	0.4	150
	07	●	●								●		○	38	50	58	–	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81		0.5	100
	10	●	●								●		○	40	50	58	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	2.58		0.6	100
	15										●		○	40	50	57	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	≀	0.8	50
	20	○	○								○		○	41	50	57	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16		1.0	–
	30	○	○					○	○		○		○	42	50	56	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	340	1.2	–
	40	○	○								○		○	42	50	56	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3		1.4	–
	50										○		○	43	50	55	2.04	2.89	3.54	4.08	5.00	6.46	7.64	9.13	12.9	≀	1.6	–
	60										○		○	43	50	55	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5		1.7	–
	80	○	○								○		○	43	50	55	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6		2.0	–
	120	○												44	50	54	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0	550	2.5	–
	200		○											45	50	53	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	640	3.3	–
	300		○											45	50	53	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5		4.2	–
	400			○										46	50	52	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103	≀	4.9	–
	500			○										46	50	52	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129		5.6	–
	600				○									47	50	52	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155	750	6.1	–
	800				○									47	50	51	32.7	46.2	56.5	65.3	80.0	103	122	146	206	≀	7.1	–
	1000					○								47	50	51	40.8	57.7	70.7	81.7	100	129	153	183	258	1,000	7.9	–
	1500					○								48	50	51	61.2	86.6	106	122	150	194	229	274	387	1,100	9.7	–
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	–
	300		○											36	40	42	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5	800	4.5	–
	400			○										36	40	42	16.3	23.1	28.3	32.7	40.0	51.6	61.1	73.0	103	≀	5.3	–
	500			○										37	40	42	20.4	28.9	35.4	40.8	50.0	64.6	76.4	91.3	129	850	5.8	–
	600				○									37	40	42	24.5	34.6	42.4	49.0	60.0	77.5	91.7	110	155	≀	6.6	–
	800				○									37	40	41	32.7	46.2	56.5	65.3	80.0	103	122	146	206		7.4	–
	1000					○								38	40	41	40.8	57.7	70.7	81.7	100	129	153	183	258	1,100	8.3	–
	1500					○								38	40	41	61.2	86.6	106	122	150	194	229	274	387	1,200	10.3	–
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
	15	○	○											19	25	31	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87		1.0	–
	30	○	○											19	25	30	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	440	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	4.0	–
	300		○											21	25	27	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5	950	4.9	–
15	05	●	●											9	15	22	–	0.29	0.35	0.41	0.50	0.65	0.76	0.91	1.29	310	0.5	100
	07	●	●											9	15	21	–	0.40	0.49	0.57	0.70	0.90	1.07	1.28	1.81	≀	0.7	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	–
	300		○											12	15	17	12.2	17.3	21.2	24.5	30.0	38.7	45.8	54.8	77.5	1,100	5.0	–

●: Available with or without strainer ○: Only available without strainer

*3) The VVP series with thread size R1/2 and larger are made-to-order.

VVP (S316L-IN) SERIES

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

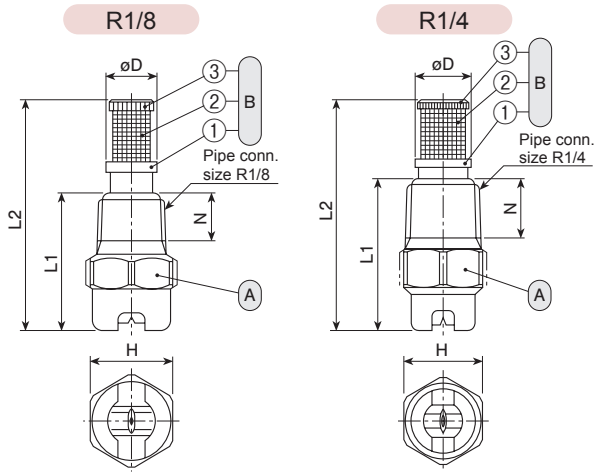
Structure	• Made of metal. • Available with or without a strainer.
Material	• S316L equivalent • Strainer: S303 or S316

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 strainer, add 2 g for R1/8 and 5 g for R1/4 to the above weight.

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

DRAWING



Ⓐ **Nozzle**
Ⓑ **Strainer** (①Strainer holder ②Strainer screen ③Strainer cap)

■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 ≀ 290	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		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 **VP**

Example: 1/4M VVP 11515 S303W

1/4M	VVP	115	15	S303	W
Pipe conn. size*4	Series	Spray angle code	Spray capacity code	Material*5	Strainer
1/8M ≀ 1M	VVP VP	115 ≀ 15	02 ≀ 1500	S303 B TPVDF PVDF PP-IN	W (with strainer) (Blank indicates "without strainer")

The VVP series with thread size R1/2 and larger are made-to-order.

VVP (S316L-IN)

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

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

*4) "M" indicates male thread ("R" of the ISO standard), e.g. 1/4M = R1/4.
*5) TPVDF and B are only for the VP series. PVDF and PP-IN are only for the VVP series.