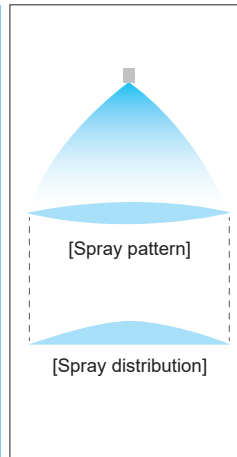
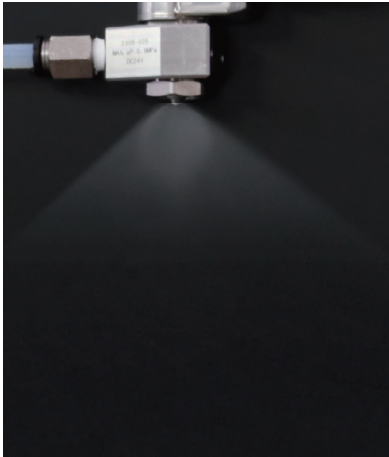


High-Frequency Pulse Spraying Solenoid-controlled Flat Spray Nozzles

Made-to-Order

SD-VV/SD-V

- Controls the spray ON/OFF with electrical signal ON/OFF. Intermittent spray with min. 0.05 sec/shot and as little as 0.17 cc/shot is possible.
- Ideal for applying a small amount of coating or marking with minimal splatter, saving liquid used.
- Changing the spray ON/OFF time setting can adjust the spray flow rate while maintaining the spray pattern and droplet size.

[STANDARD PRESSURE]

0.3 MPa

[APPLICATIONS]

- Coating: Water, oil, lubricant, insecticide, herbicide, aqueous solution
- Moisture control: Paper, food
- Cooling: glass plate

SD-VV SERIES

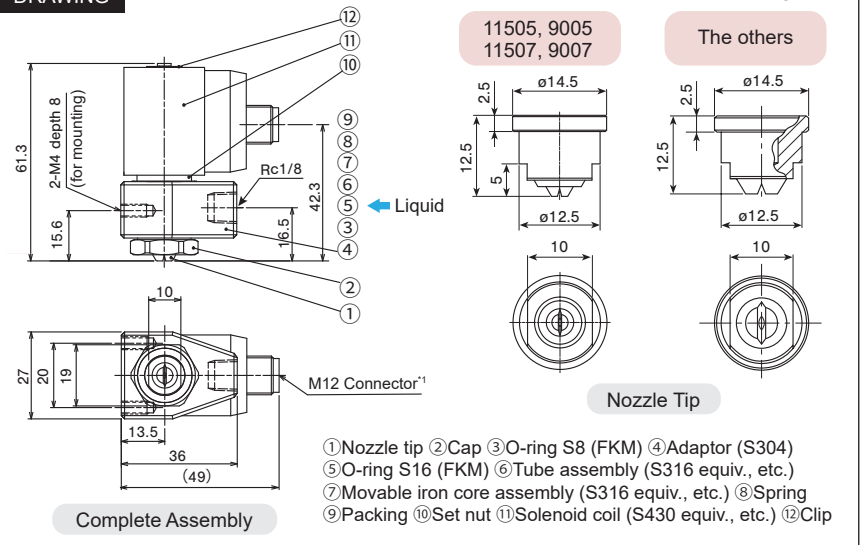
Structure	<ul style="list-style-type: none"> • Includes a nozzle tip, cap, and adaptor-solenoid section. Nozzle tips can be replaced for wear or changed to achieve a different spray capacity and angle.
Material	<ul style="list-style-type: none"> • Nozzle tip: S303 • Cap: S304 • Solenoid section: Various materials
Weight	<ul style="list-style-type: none"> • Complete assembly: 220g • Nozzle tip: 10g

Max. temperature: 60°C
Protection Structure IP67

SD-VV: The materials used in the parts that come into contact with liquids comply with the Food Sanitation Law in Japan.

[Note]

- Appearance and dimensions may differ slightly depending on material and nozzle code.
- In our material code, "S" indicates "stainless steel".

DRAWING

*1) Cable for M12 connector not included. Please use SMC Corporation's "JSX022-30-1-length" cable (length: 1m, 2m, or 5m).

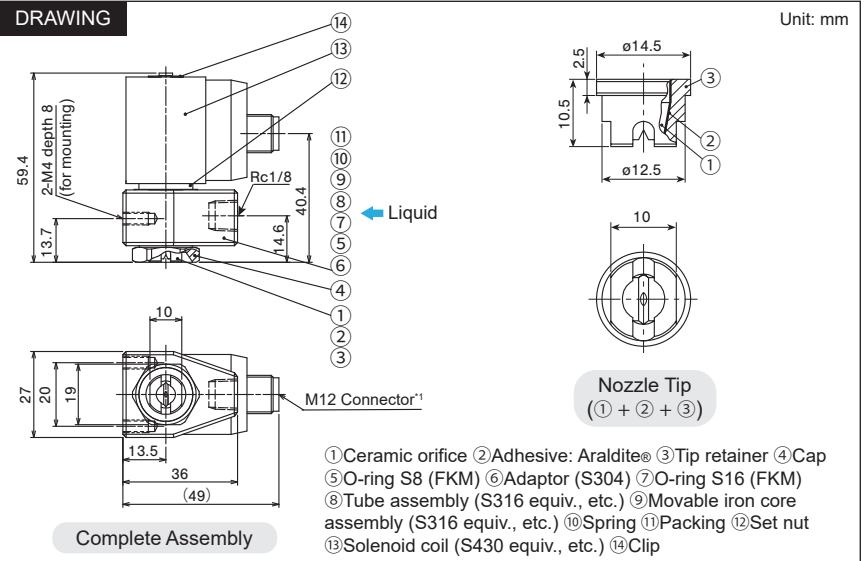
SD-V SERIES (with ceramic orifice)

Structure	<ul style="list-style-type: none"> • Has a ceramic orifice in the nozzle tip. • Includes a nozzle tip, cap, and adaptor-solenoid section. Nozzle tips can be replaced for wear or changed to achieve a different spray capacity and angle.
Material	<ul style="list-style-type: none"> • Nozzle tip: ceramic orifice, S303 • Cap: S304 • Solenoid section: Various materials
Weight	<ul style="list-style-type: none"> • Complete assembly: 220g • Nozzle tip: 6.6g

Max. temperature: 60°C
Protection Structure IP67

[Note]

- Appearance and dimensions may differ slightly depending on material and nozzle code.
- In our material code, "S" indicates "stainless steel".

DRAWING**Solenoid Specifications (for SD-VV and SD-V Series)****Valve**

Valve structure	Direct acting poppet
Orifice diameter	ø1.6 mm
Pressure resistance	2.0 MPa
Max. operating pressure difference	0.9 MPa
Ambient temperature	-20~60°C
Operating fluid temperature (water)	1~60°C
Operating fluid temperature (oil)	-5~60°C (w/ dynamic viscosity of 50mm ² /s or less)
Materials	Body: Stainless steel, Seal: FKM
Protection structure	IP67

Coil

Rated voltage	24 VDC
Allowable voltage fluctuation	±10% of rated voltage
Allowable leakage voltage	Less than 2% of rated voltage
Electrical circuit	N.C.
Temperature rise value	65°C
Power consumption	4W

Solenoid-controlled Flat Spray Nozzles
SD-VV/SD-V SERIES

Spray angle code	Spray capacity code	SD-VV	SD-V	Spray angle (°)			Spray capacity (L/min) ²								Mean drop. dia. (μm)	Free pass. dia. (mm)
				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	0.9 MPa		
115	03		○	100	114	124	—	0.17	0.21	0.24	0.29	0.38	0.45	0.51	160	0.2
	04		○	100	114	124	—	0.22	0.28	0.32	0.39	0.50	0.59	0.67	160	0.2
	05	○		101	114	124	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	180	0.3
	07	○		101	113	124	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	180	0.3
	10	○		101	112	123	0.38	0.54	0.66	0.76	0.93	1.20	1.42	1.61	250	0.4
	15	○		101	111	122	0.54	0.77	0.94	1.08	1.33	1.71	2.02	2.30	250	0.5
90	02		○	74	89	100	—	0.11	0.14	0.16	0.20	0.25	0.30	0.34	150	0.2
	03		○	74	89	100	—	0.17	0.21	0.24	0.29	0.38	0.45	0.51	170	0.2
	04		○	75	89	100	—	0.22	0.28	0.32	0.39	0.50	0.59	0.67	170	0.3
	05	○		76	89	99	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	190	0.3
	07	○		76	88	99	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	190	0.4
	10	○		76	87	98	0.41	0.54	0.66	0.76	0.93	1.20	1.42	1.61	270	0.5
	15	○		75	86	97	0.61	0.77	0.94	1.08	1.33	1.71	2.02	2.30	270	0.5
80	02		○	65	79	90	—	0.11	0.14	0.16	0.20	0.25	0.30	0.34	160	0.2
	03		○	65	79	90	—	0.17	0.21	0.24	0.29	0.38	0.45	0.51	170	0.3
	04		○	65	79	90	—	0.22	0.28	0.32	0.39	0.50	0.59	0.67	170	0.3
	05	○		66	78	89	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	200	0.3
	07	○		66	78	88	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	200	0.4
	10	○		66	77	88	0.41	0.54	0.66	0.76	0.93	1.20	1.42	1.61	280	0.5
	15	○		65	76	87	0.61	0.77	0.94	1.08	1.33	1.71	2.02	2.30	280	0.5
65	02		○	51	64	75	—	0.11	0.14	0.16	0.20	0.25	0.30	0.34	160	0.2
	03		○	51	64	75	—	0.17	0.21	0.24	0.29	0.38	0.45	0.51	180	0.3
	04		○	50	64	75	—	0.22	0.28	0.32	0.39	0.50	0.59	0.67	180	0.3
	05	○		51	64	74	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	210	0.4
	07	○		51	63	73	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	210	0.5
	10	○		52	62	72	0.41	0.54	0.66	0.76	0.93	1.20	1.42	1.61	290	0.5
	15	○		51	61	72	0.61	0.77	0.94	1.08	1.33	1.71	2.02	2.30	290	0.5
50	03		○	36	49	60	—	0.17	0.21	0.24	0.29	0.38	0.45	0.51	200	0.3
	04		○	36	49	60	—	0.22	0.28	0.32	0.39	0.50	0.59	0.67	200	0.4
	05	○		37	48	59	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	230	0.4
	07	○		37	48	58	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	230	0.5
	10	○		38	48	57	0.38	0.54	0.66	0.76	0.93	1.20	1.42	1.61	320	0.5
	15	○		37	47	56	0.54	0.77	0.94	1.08	1.33	1.71	2.02	2.30	320	0.5
40	05	○		29	39	48	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	250	0.4
	07	○		29	38	48	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	310	0.5
	10	○		29	38	46	0.38	0.54	0.66	0.76	0.93	1.20	1.42	1.61	310	0.5
25	05	○		17	24	32	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	290	0.5
	07	○		17	24	32	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	310	0.5
	10	○		17	23	31	0.38	0.54	0.66	0.76	0.93	1.20	1.42	1.61	460	0.5
	15	○		17	22	30	0.54	0.77	0.94	1.08	1.33	1.71	2.02	2.30	460	0.5
15	05	○		8	14	22	—	0.28	0.34	0.39	0.48	0.62	0.74	0.84	340	0.5
	07	○		8	14	21	—	0.38	0.47	0.54	0.67	0.86	1.02	1.15	340	0.5
	10	○		8	13	20	0.38	0.54	0.66	0.76	0.93	1.20	1.42	1.61	540	0.5
	15	○		8	13	19	0.54	0.77	0.94	1.08	1.33	1.71	2.02	2.30	540	0.5

*2) These values are for continuous spraying.

Operation Time Chart

The electrical signal ON/OFF controls the spraying.

Electrical signal	OFF	ON	OFF	ON	OFF
Liquid	Stop	Spray	Stop	Spray	Stop

These nozzle series are made-to-order.

HOW TO ORDER

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

① Complete Assembly

Example: VV 11505 S303 + SD S304

VV	115	05	S303 + SD S304
Series	Spray angle code	Spray capacity code	Nozzle tip Material
■ VV	■ 115	■ 02	
■ V	∩	∩	
	■ 15	■ 15	

② Nozzle Tip Only

Example: 1/4 VV 11505 -SD S303

1/4	VV	115	05	-SD S303
	Series	Spray angle code	Spray capacity code	Material
	■ VV	■ 115	■ 02	
	■ V ³	∩	∩	
		■ 15	■ 15	

*3) For the SD-V Series, omit "-SD" from the nozzle tip product name.

Please feel free to send any inquiry, request for information or quote regarding this product to the contact below.