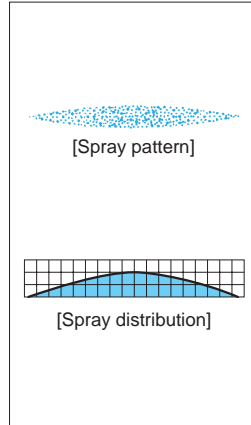


# Flat Spray Nozzles with ON/OFF Control

SO-V  
SO-VV



- Flat spray pattern with a mountain-shaped spray distribution and gradually tapered edges.
- Anti-drip design.
- Quick ON/OFF spray response.
- Spray ON/OFF can be regulated by turning the pilot air ON/OFF.

**[STANDARD PRESSURE]**  
0.3 MPa

**[APPLICATIONS]**  
Coating: Release agent, lubricant, food additive such as seasoning  
Moisture control: Paper, food

## SO-V SERIES (with ceramic orifice)

Structure	<ul style="list-style-type: none"> <li>• Spray ON/OFF can be regulated by switching the pilot air ON/OFF. The pilot air activates an internal piston to regulate the spray.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle orifice: ceramic</li> <li>• Metal parts: S303</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• 150 g</li> </ul>

Max. operating pressure: 0.5 MPa

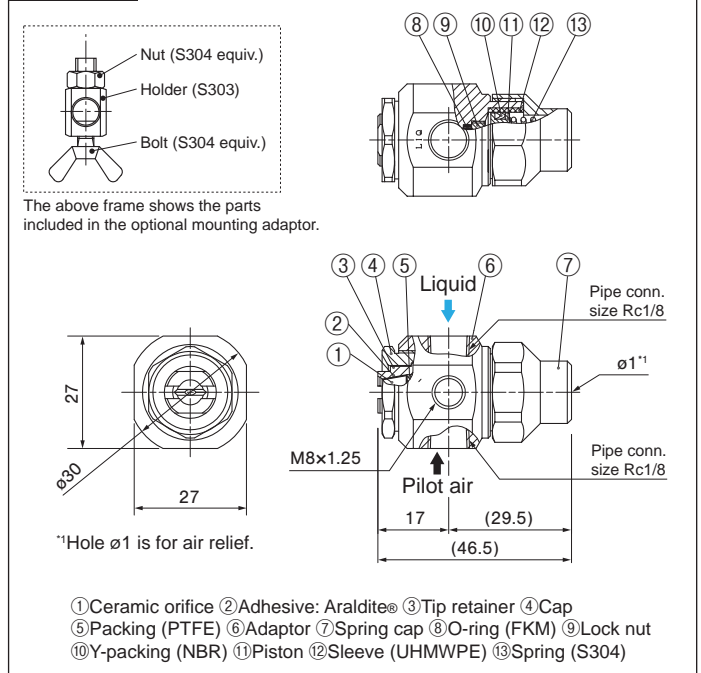
[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

## Mounting Adaptor (optional)

A mounting adaptor ( $\phi 10$  or  $\phi 8$ ) is available to attach the SO-V/SO-VV series nozzle to a pole and spray in the desired direction.

## DRAWING

Unit: mm



## SO-VV SERIES

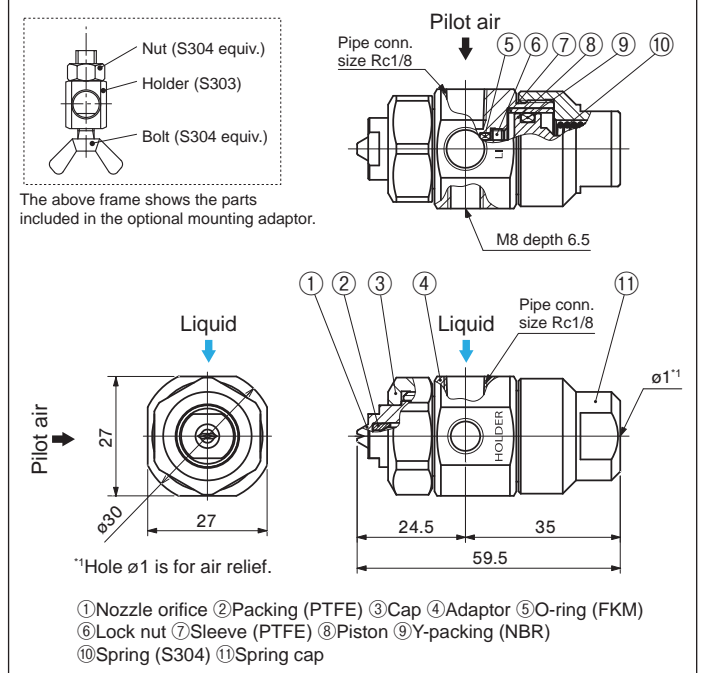
Structure	<ul style="list-style-type: none"> <li>• Spray ON/OFF can be regulated by switching the pilot air ON/OFF. The pilot air activates an internal piston to regulate the spray.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• S303</li> </ul>
Weight	<ul style="list-style-type: none"> <li>• 170 g</li> </ul>

Max. operating pressure: 1.0 MPa

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

## DRAWING

Unit: mm



Flat Spray Nozzles with ON/OFF Control  
SO-V/SO-VV SERIES

Flat Spray

SO-V Series

Spray angle code	Spray capacity code	Spray angle (°)		Spray capacity (L/min)						Mean droplet diameter (µm)	Free passage diameter (mm)
		0.15 MPa	0.3 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa		
115	03	101	115	—	0.17	0.21	0.24	0.30	0.39	140	0.2
	04	102	115	—	0.23	0.28	0.33	0.40	0.52	∩	0.2
	05	102	115	—	0.29	0.35	0.41	0.50	0.65	160	0.3
	07	103	115	—	0.40	0.49	0.57	0.70	0.90	∩	0.3
	10	103	115	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.4
	15	104	115	0.61	0.87	1.06	1.23	1.50	1.94	∩	0.5
	20	104	115	0.82	1.15	1.41	1.63	2.00	2.58	270	0.6
90	02	76	90	—	0.12	0.14	0.16	0.20	0.26	145	0.2
	03	76	90	—	0.17	0.21	0.24	0.30	0.39	150	0.2
	04	77	90	—	0.23	0.28	0.33	0.40	0.52	∩	0.3
	05	77	90	—	0.29	0.35	0.41	0.50	0.65	170	0.3
	07	78	90	—	0.40	0.49	0.57	0.70	0.90	∩	0.4
	10	78	90	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.5
	15	79	90	0.61	0.87	1.06	1.23	1.50	1.94	∩	0.6
	20	79	90	0.82	1.15	1.41	1.63	2.00	2.58	280	0.7
80	02	67	80	—	0.12	0.14	0.16	0.20	0.26	150	0.2
	03	67	80	—	0.17	0.21	0.24	0.30	0.39	∩	0.3
	04	67	80	—	0.23	0.28	0.33	0.40	0.52	∩	0.3
	05	67	80	—	0.29	0.35	0.41	0.50	0.65	180	0.3
	07	68	80	—	0.40	0.49	0.57	0.70	0.90	∩	0.4
	10	68	80	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.5
	15	69	80	0.61	0.87	1.06	1.23	1.50	1.94	∩	0.7
	20	69	80	0.82	1.15	1.41	1.63	2.00	2.58	290	0.8
65	02	52	65	—	0.12	0.14	0.16	0.20	0.26	155	0.2
	03	52	65	—	0.17	0.21	0.24	0.30	0.39	160	0.3
	04	52	65	—	0.23	0.28	0.33	0.40	0.52	∩	0.3
	05	52	65	—	0.29	0.35	0.41	0.50	0.65	190	0.4
	07	53	65	—	0.40	0.49	0.57	0.70	0.90	∩	0.5
	10	54	65	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.6
	15	54	65	0.61	0.87	1.06	1.23	1.50	1.94	∩	0.8
	20	55	65	0.82	1.15	1.41	1.63	2.00	2.58	310	0.9
50	03	37	50	—	0.17	0.21	0.24	0.30	0.39	180	0.3
	04	37	50	—	0.23	0.28	0.33	0.40	0.52	∩	0.4
	05	38	50	—	0.29	0.35	0.41	0.50	0.65	210	0.4
	07	38	50	—	0.40	0.49	0.57	0.70	0.90	∩	0.5
	10	40	50	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.6
	15	40	50	0.61	0.87	1.06	1.23	1.50	1.94	∩	0.8
	20	41	50	0.82	1.15	1.41	1.63	2.00	2.58	340	1.0
40	05	30	40	—	0.29	0.35	0.41	0.50	0.65	230	0.4
	07	30	40	—	0.40	0.49	0.57	0.70	0.90	∩	0.5
	10	31	40	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.7
	20	32	40	0.82	1.15	1.41	1.63	2.00	2.58	380	1.0
25	05	18	25	—	0.29	0.35	0.41	0.50	0.65	270	0.5
	07	18	25	—	0.40	0.49	0.57	0.70	0.90	∩	0.6
	10	18	25	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.8
	15	19	25	0.61	0.87	1.06	1.23	1.50	1.94	440	1.0
15	05	9	15	—	0.29	0.35	0.41	0.50	0.65	310	0.5
	07	9	15	—	0.40	0.49	0.57	0.70	0.90	∩	0.7
	10	9	15	0.41	0.58	0.71	0.82	1.00	1.29	∩	0.8
	15	10	15	0.61	0.87	1.06	1.23	1.50	1.94	510	1.0

SO-VV Series

Spray angle code	Spray capacity code	Spray angle (°)			Spray capacity (L/min)								Mean droplet diameter (µm)	Free passage diameter (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	1 MPa		
115	05	102	115	124	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	180	0.3
	07	103	115	124	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	200	0.3
	10	103	115	124	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	220	0.4
90	05	77	90	100	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	190	0.3
	07	78	90	100	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	210	0.4
	10	78	90	99	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	230	0.5
80	05	67	80	90	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	200	0.3
	07	68	80	89	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	220	0.4
	10	68	80	89	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	240	0.5
65	05	52	65	74	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	210	0.4
	07	53	65	74	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	230	0.5
	10	54	65	73	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	250	0.6
50	05	38	50	59	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	230	0.4
	07	38	50	58	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	250	0.5
	10	40	50	58	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	270	0.6
40	05	30	40	48	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	250	0.4
	07	30	40	48	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	280	0.5
	10	31	40	47	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	300	0.7
25	05	18	25	32	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	350	0.5
	07	18	25	32	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	390	0.6
	10	18	25	32	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	420	0.8
15	05	9	15	22	—	0.29	0.35	0.41	0.50	0.65	0.76	0.91	680	0.5
	07	9	15	21	—	0.40	0.49	0.57	0.70	0.90	1.07	1.28	740	0.7
	10	9	15	21	0.41	0.58	0.71	0.82	1.00	1.29	1.53	1.83	820	0.8

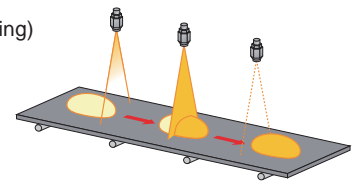
Operation Time Chart

The pilot air ON/OFF controls the spray operation.

Pilot air	OFF	ON	OFF	ON	OFF
Liquid	Stop	Spray	Stop	Spray	Stop

Example of Use

Coating (seasoning)



HOW TO ORDER

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

SO-V

Example: 1/8 SO-V 11503 S303

1/8 <sup>2</sup> SO-V	115	03	S303
	Spray angle code	Spray capacity code	Material
	115	02	
	15	20	

When ordering the optional Mounting Adaptor, available with a ø8 or ø10, please specify "(with ø10 [or ø8] mounting adaptor)" at the end of the product code.

SO-VV

Example: 1/8 SO-VV 11505 S303

1/8 <sup>2</sup> SO-VV	115	05	S303
	Spray angle code	Spray capacity code	Material
	115	05	
	15	10	

\*2) Indicates Rc1/8 for the liquid and pilot air connection thread size.

ALSO AVAILABLE!

Solid Stream Jet with ON/OFF Control

SO-CC  
SO-CM  
SERIES

See page 100 for more details.

CAUTIONS

- Supply liquid pressure at 0.5 MPa or less for the SO-V series, and 1.0 MPa or less for the SO-VV series.
- Supply pilot air pressure between 0.2 and 0.5 MPa.
- For better shut off and to prevent dripping, purge the air between the solenoid valve and the nozzle when it is shut off, using a 3-way solenoid valve.