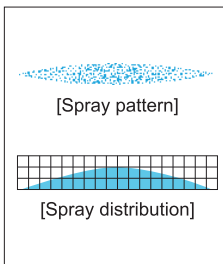


# Quick-detachable Standard Flat Spray Nozzles

Stainless Steel

## INVV-SS/INV

Flat Spray



### [Features]

- Flat spray pattern with a mountain-shaped spray distribution having gradually tapered edges.
- Easy mounting/dismounting with a knurled tab.
- Quick-detachable design helps to significantly reduce maintenance time.

### [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: Oils, lubricants, glues, insecticides, herbicides

Cooling: Tanks, roofs

Water screen: Dust suppression, deodorization

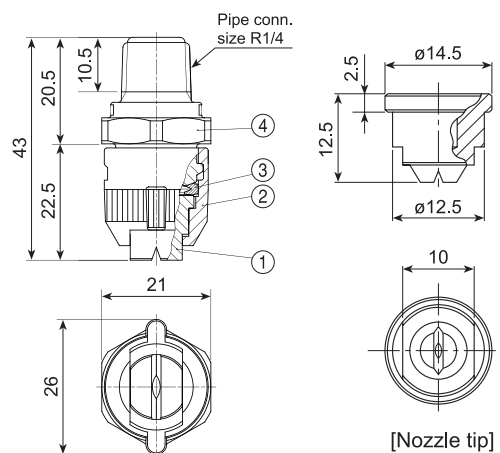
## INVV-SS series

	INVV-SS series
Structure	<ul style="list-style-type: none"> <li>• Comprises a nozzle part (nozzle tip + cap + packing) and an adaptor.</li> <li>• Worn-out nozzle tip and other parts are individually available for replacement.</li> <li>• The nozzle part can be removed and installed simply by turning 90° with one hand.</li> <li>• Tip or packing will not fall off when removing the nozzle part.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle tip: S303</li> <li>• Cap and Adaptor: S316L equivalent</li> <li>• Packing: FEPM</li> </ul>
Mass	<ul style="list-style-type: none"> <li>• Complete assemblies: 57 g</li> <li>• Nozzle tip: 13 g</li> </ul>

Heat resistance temperature: 150°C

Withstanding pressure: 2.0 MPa

[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.



①Nozzle tip ②Cap ③Packing ④Adaptor

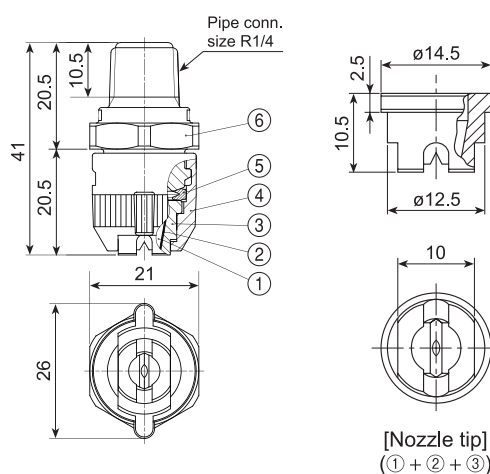
## INV series

	INV series (with ceramic orifice inserted)
Structure	<ul style="list-style-type: none"> <li>• Includes a ceramic orifice in the nozzle tip.</li> <li>• Comprises a nozzle part (nozzle tip + cap + packing) and an adaptor.</li> <li>• Worn-out nozzle tip and other parts are individually available for replacement.</li> <li>• The nozzle part can be removed and installed simply by turning 90° with one hand.</li> <li>• Tip or packing will not fall off when removing the nozzle part.</li> </ul>
Material	<ul style="list-style-type: none"> <li>• Nozzle orifice: Ceramic</li> <li>• Tip retainer: S303</li> <li>• Cap and Adaptor: S316L equivalent</li> <li>• Packing: FEPM</li> </ul>
Mass	<ul style="list-style-type: none"> <li>• Complete assemblies: 51 g</li> <li>• Nozzle tip: 6.5 g</li> </ul>

Heat resistance temperature: 60°C

Withstanding pressure: 2.0 MPa

[Note] Appearance and dimensions may differ slightly depending on materials and nozzle codes.



①Ceramic orifice ②Adhesive: Araldite ③Tip retainer  
④Cap ⑤Packing ⑥Adaptor

# Quick-detachable Standard Flat Spray Nozzles

## Stainless Steel **INVV-SS/INV** series

Spray angle code	Spray capacity code	INVV-SS (All metal)	INV with ceramic orifice	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	2 MPa			
115	60	○		107	115	121	2.45	3.46	4.24	4.90	6.00	7.75	9.17	11.0	15.5	340	1.0	
	80	○		107	115	121	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	5	1.2	
	100	○		107	115	120	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8		1.4	
	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	
90	40	○	○	81	90	97	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	300	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	5	1.8	
	120	○		83	90	95	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0		1.9	
	140	○		83	90	95	5.72	8.08	9.90	11.4	14.0	18.1	21.4	25.6	36.1		2.1	
	170	○		83	90	95	6.94	9.82	12.0	13.9	17.0	22.0	26.0	31.1	43.9		2.3	
200	○		84	90	95	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	540	2.4		
80	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	
	80	○	○	72	80	86	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	5	1.7	
	100	○		72	80	85	4.08	5.77	7.07	8.17	10.0	12.9	15.3	18.3	25.8		2.0	
	120	○		73	80	85	4.90	6.93	8.49	9.80	12.0	15.5	18.3	21.9	31.0		2.3	
	200	○		74	80	85	8.16	11.5	14.1	16.3	20.0	25.8	30.6	36.5	51.6	550	2.8	
65	30	○	○	56	65	72	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75	310	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	5	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	
50	20	○	○	41	50	57	0.82	1.15	1.41	1.63	2.00	2.58	3.06	3.65	5.16	320	1.0	
	30	○	○	42	50	56	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.2	
	40	○	○	42	50	56	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	5	1.4	
	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		2.4	
	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	
40	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	5	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	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	5	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	15	○		10	15	20	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	500	1.0	
	30	○		10	15	19	1.23	1.73	2.12	2.45	3.00	3.88	4.58	5.48	7.75		1.5	
	40	○		10	15	19	1.63	2.31	2.83	3.27	4.00	5.16	6.11	7.30	10.3	5	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	

Flat Spray

## How to order

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

### ① Complete assemblies

〈Example〉 1/4M INVV 11560 S303 (FEPM) + S316L-IN

1/4M INVV 115 60 S303 (FEPM) + S316L-IN

Series	Spray angle code	Spray capacity code
INVV	115	15
INV	5	200

### ② Nozzle tip only

〈Example〉 1/4 VV 11560 S303

1/4 VV 115 60 S303

Series	Spray angle code	Spray capacity code
VV	115	15
V	5	200

Note:

Nozzle tips of INVV-SS series are the same as those used on VV series.  
Nozzle tips of INV series are the same as those used on V series.