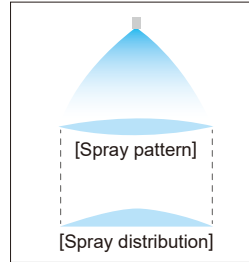


Quick-Detachable Standard Flat Spray Nozzles

Stainless Steel

**INVV-SS
INV**

Flat Spray



- Flat spray pattern with a mountain-shaped spray distribution and gradually tapered edges.
- The unique design accommodates easy installation and removal.
- Quick-detachable design helps to significantly reduce maintenance time.

[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: Oils, lubricants, glues, insecticides, herbicides

Cooling: Tanks, roofs

Water screen: Dust suppression, deodorization

INVV-SS SERIES

Structure	• Includes a nozzle section (nozzle tip + cap + packing) and an adaptor. • Worn-out nozzle tips and other parts are available separately for replacement. • Easy installation and removal of the nozzle section with a twist of about 90°. • Tip or packing will not fall out when the nozzle section is removed.
Material	• Nozzle tip: S303 • Cap and Adaptor: S316L equivalent • Packing: FEPM
Weight	• Complete assembly: 57 g • Nozzle tip: 11 g

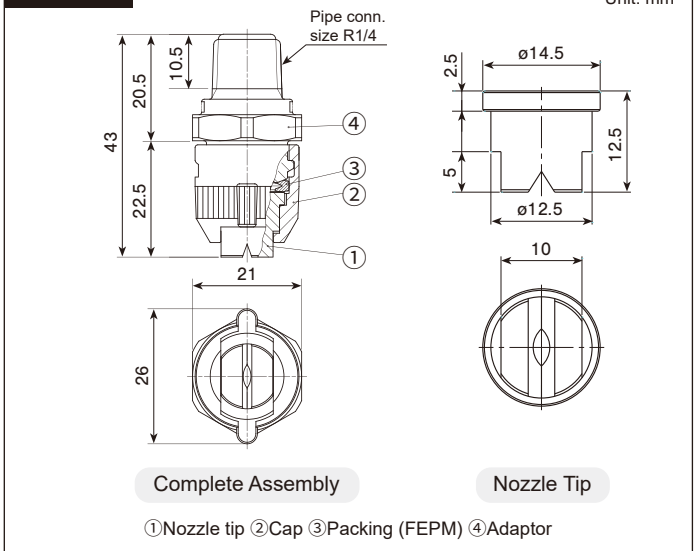
Max. temperature: 150°C

Max. operating pressure: 2.0 MPa

The flat spray spread direction is parallel to the surface milling.

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

DRAWING



INV SERIES (with ceramic orifice)

Structure	• Has a ceramic orifice in the nozzle tip. • Includes a nozzle section (nozzle tip + cap + packing) and an adaptor. • Worn-out nozzle tips and other parts are available separately for replacement. • Easy installation and removal of the nozzle section with a twist of about 90°. • Tip or packing will not fall out when the nozzle section is removed.
Material	• Nozzle orifice: ceramic • Tip retainer: S303 • Cap and Adaptor: S316L equivalent • Packing: FEPM
Weight	• Complete assembly: 51 g • Nozzle tip: 6.5 g

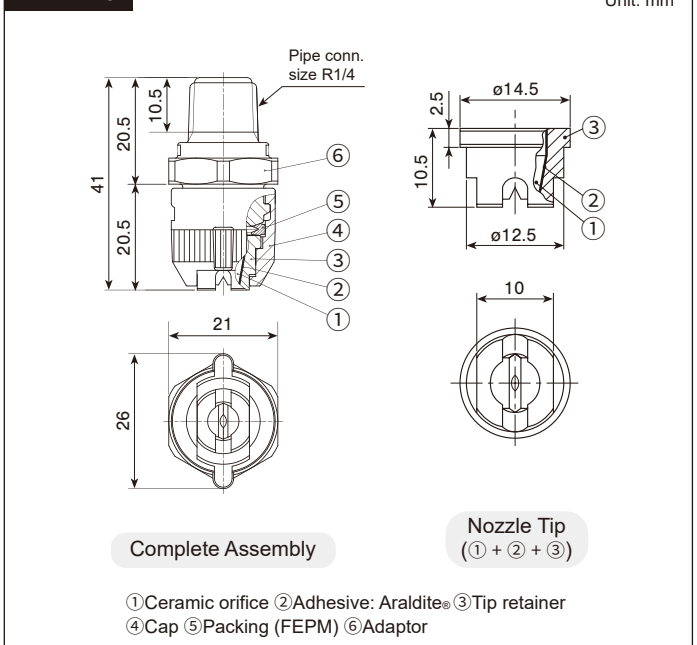
Max. temperature: 60°C

Max. operating pressure: 2.0 MPa

The flat spray spread direction is parallel to the surface milling.

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

DRAWING



Spray angle code	Spray capacity code	INVV-SS	INV	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	1.3
	80	○		107	115	121	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	}	1.5
	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
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	}	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	2.7	
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	}	1.1
	80	○	○	72	80	86	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	}	1.5
	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
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	}	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	}	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	}	2.5
	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
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	}	1.5
	80	○		34	40	44	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	}	2.2
	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	}	1.7
	80	○		20	25	29	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	}	2.4
	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
15	15	○		10	15	20	0.61	0.87	1.06	1.23	1.50	1.94	2.29	2.74	3.87	500	1.1
	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	}	1.8
	80	○		11	15	18	3.27	4.62	5.66	6.53	8.00	10.3	12.2	14.6	20.6	}	2.6
	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

HOW TO ORDER

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

① Complete Assembly

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

Pipe conn. size ¹⁾	Series	Spray angle code	Spray capacity code	Nozzle tip material	Packing material	Material of cap & adaptor
1/4M	INVV	115	60	S303 (FEPM) + S316L-IN		
	INV	15	200			

③ Adaptor (R1/4), cap, and packing are available separately for purchase.

*1) "M" indicates male thread ("R" of the ISO standard), e.g. 1/4M = R1/4.

② Nozzle Tip Only²⁾

Example: VV 11560-TIP S303

Series	Spray angle code	Spray capacity code
VV	115	60
V	15	200

*2) Nozzle tips for the INVV-SS series are the same as those used for the VV series.
Nozzle tips for the INV series are the same as those used for the V series.

ALSO AVAILABLE! **Stainless Steel**

Quick-Detachable **Even Flat Spray** Nozzles **INVE SERIES** >> See page 32 of this catalog.

Quick-Detachable **Full Cone Spray** Nozzles **INJXX-SS SERIES** >> See page 74 of this catalog.