

Quick-Detachable Standard Flat Spray Nozzles

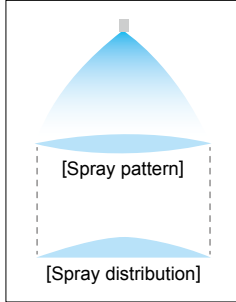
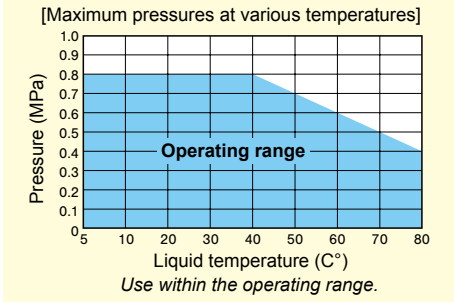
Plastic

INVV

Flat Spray



- Flat spray pattern with a mountain-shaped spray distribution and gradually tapered edges.
- Made of highly chemical and heat resistant plastic.
- Quick-detachable design helps to significantly reduce maintenance time.
- Nozzle tips are color-coded by spray capacity for easy identification.
- Adaptors are color-coded by material: gray for PP and black for PPS. (PVDF adaptor is only available on a made-to-order basis.)



[STANDARD PRESSURE]
0.3 MPa

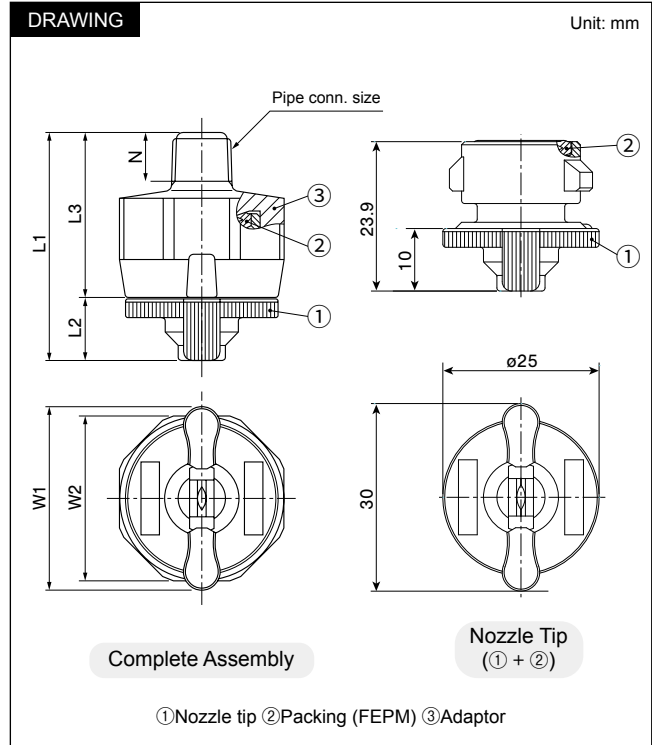
[APPLICATIONS]

- Cleaning
- Etching
- Stripping
- Chemical treatment
- For periodic maintenance or for applications where precise spray alignment is required

Structure	<ul style="list-style-type: none"> • Two-piece structure including a nozzle tip with packing and an adaptor. • Easy installation and removal of the nozzle tip with a twist of about 60°.
Material	<ul style="list-style-type: none"> • Nozzle tip: PP • Adaptor: PP or PPS [SPECIAL ORDER MATERIAL: PVDF] • Packing: FEPM

Pipe conn. size	Dimensions (mm)						Weight (g)	
	L1	L2	L3	W1	W2	N	PP	PPS
R1/8	37	10	27	30	27	8	9	12
R1/4	40	10	30	30	27	11.5	10	13
R3/8	40	10	30	30	27	12	11	14

- [Note]
- **INVV series nozzles are not compatible with the discontinued ISVV series.**
 - Appearance and dimensions may differ slightly depending on material and nozzle code.
 - The tabs (wings) are in line with the flat spray spread direction.



Spray angle code	Spray capacity code	Pipe connection size			Spray angle (°)			Spray capacity (L/min)						Mean drop. dia. (µm)	Free pass. dia. (mm)	Nozzle tip color	
		R1/8	R1/4	R3/8	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
115	05	○	○	○	102	115	124	—	0.29	0.35	0.41	0.50	0.65	0.76	160	0.3	Green
	07	○	○	○	103	115	124	—	0.40	0.49	0.57	0.70	0.90	1.07			
	10	○	○	○	103	115	124	0.41	0.58	0.71	0.82	1.00	1.29	1.53			
	15	○	○	○	104	115	123	0.61	0.87	1.06	1.23	1.50	1.94	2.29			
	20	○	○	○	104	115	123	0.82	1.15	1.41	1.63	2.00	2.58	3.06	300	0.6	Black
	30	○	○	○	105	115	122	1.23	1.73	2.12	2.45	3.00	3.88	4.58			
	40	○	○	○	106	115	122	1.63	2.31	2.83	3.27	4.00	5.16	6.11			
	50	○	○	○	106	115	122	2.04	2.89	3.54	4.08	5.00	6.46	7.64			
90	05	○	○	○	77	90	100	—	0.29	0.35	0.41	0.50	0.65	0.76	170	0.3	Green
	07	○	○	○	78	90	100	—	0.40	0.49	0.57	0.70	0.90	1.07			
	10	○	○	○	78	90	99	0.41	0.58	0.71	0.82	1.00	1.29	1.53			
	15	○	○	○	79	90	99	0.61	0.87	1.06	1.23	1.50	1.94	2.29			
	20	○	○	○	79	90	98	0.82	1.15	1.41	1.63	2.00	2.58	3.06	300	0.7	Black
	30	○	○	○	80	90	97	1.23	1.73	2.12	2.45	3.00	3.88	4.58			
	40	○	○	○	81	90	97	1.63	2.31	2.83	3.27	4.00	5.16	6.11			
	50	○	○	○	81	90	97	2.04	2.89	3.54	4.08	5.00	6.46	7.64			
65	05	○	○	○	52	65	74	—	0.29	0.35	0.41	0.50	0.65	0.76	190	0.4	Green
	07	○	○	○	53	65	74	—	0.40	0.49	0.57	0.70	0.90	1.07			
	10	○	○	○	54	65	73	0.41	0.58	0.71	0.82	1.00	1.29	1.53			
	15	○	○	○	54	65	73	0.61	0.87	1.06	1.23	1.50	1.94	2.29			
	20	○	○	○	55	65	72	0.82	1.15	1.41	1.63	2.00	2.58	3.06	350	0.9	Black
	30	○	○	○	56	65	72	1.23	1.73	2.12	2.45	3.00	3.88	4.58			
	40	○	○	○	56	65	71	1.63	2.31	2.83	3.27	4.00	5.16	6.11			
	50	○	○	○	57	65	71	2.04	2.89	3.54	4.08	5.00	6.46	7.64			
50	05	○	○	○	38	50	59	—	0.29	0.35	0.41	0.50	0.65	0.76	210	0.4	Green
	07	○	○	○	38	50	58	—	0.40	0.49	0.57	0.70	0.90	1.07			
	10	○	○	○	40	50	58	0.41	0.58	0.71	0.82	1.00	1.29	1.53			
	15	○	○	○	40	50	57	0.61	0.87	1.06	1.23	1.50	1.94	2.29			
	20	○	○	○	41	50	57	0.82	1.15	1.41	1.63	2.00	2.58	3.06	400	1.0	Black
	30	○	○	○	42	50	56	1.23	1.73	2.12	2.45	3.00	3.88	4.58			
	40	○	○	○	42	50	56	1.63	2.31	2.83	3.27	4.00	5.16	6.11			
	50	○	○	○	43	50	55	2.04	2.89	3.54	4.08	5.00	6.46	7.64			

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

① **Complete Assembly**
 Example: 1/8M INVV 9030 PP (FEPM) + PP
 1/8M INVV 90 30 PP (FEPM) + PP
 Pipe conn. size* Spray angle code Spray capacity code Nozzle tip material (packing: FEPM) Adaptor material and color
 1/8M 115 05 PP
 1/4M 50 50 PPS
 3/8M 50 50

② **Nozzle Tip Only (with packing)**
 Example: INVV 9030 PP (FEPM)
 INVV 90 30 PP (FEPM)
 Spray angle code Spray capacity code Nozzle tip material (packing: FEPM)
 115 05
 50 50

③ Adaptor is available for purchase separately.
 **"M" indicates male thread ("R" of the ISO standard), e.g. 1/8M = R1/8.

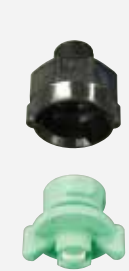
ALSO AVAILABLE!

Quick-Detachable
 Off-Center Even Flat
 Spray Nozzles
INOVE SERIES
 See page 28 for more details.

Quick-Detachable
 Full Cone
 Spray Nozzles
INJXX SERIES
 See page 72 for more details.

Note: If a plug tip is required instead of a nozzle tip, see page 27 for the quick-detachable **IN PLUG** series.

Custom Order Example Featuring Ceramic Orifice



In applications where wear resistance is required due to the sprayed liquid, a customized solution, such as using ceramic for the nozzle orifice, may be considered. Contact us for more details.

- Key Points:**
- Features a high-purity alumina ceramic orifice in the nozzle tip.
 - Improved wear resistance for longer service life and reduced replacement frequency.
 - One-piece molded design without adhesive for superior chemical resistance