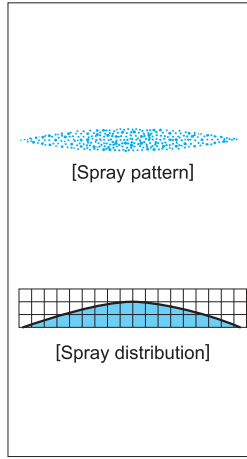


# One-piece Structure Standard Flat Spray Nozzles

# UVVP

Flat Spray



### [Features]

- Flat spray pattern with a mountain-shaped spray distribution having gradually tapered edges.
- UVVP series made of ultrahigh molecular weight polyethylene features high wear resistance and keep stable performance as polishing nozzles over prolonged use.

### [Standard Pressure]

0.3 MPa

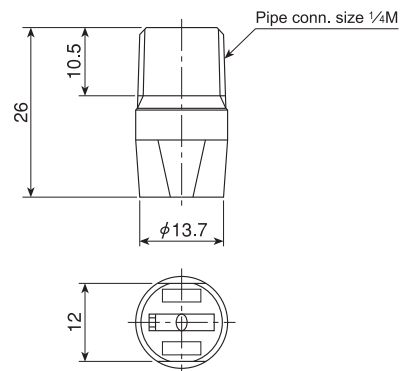
### [Applications]

Polishing: Liquid honing, through-hole  
Others: Washing, spraying, cooling

## UVVP series

UVVP series	
Structure	• Simple one-piece structure to be screwed into pipe.
Material	• Ultrahigh molecular weight polyethylene
Mass	• 2.5 g

[Note] • Appearance and dimensions may differ slightly depending on materials and nozzle codes.  
• The spread of the flat spray is parallel to the grooves.



Spray Capacity Code	Pipe Conn. Size	Spray Angle (°)			Spray Capacity (ℓ/min)						Mean Drop. Dia. (μm)	Free Pass. Dia. (mm)
		0.15 MPa	0.3 MPa	0.5 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.5 MPa		
40	1/4M	50	65	70	1.63	2.31	2.83	3.27	4.00	5.16	300 360	1.3
50		51	65	70	2.04	2.89	3.54	4.08	5.00	6.46		1.5

### How to order

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

(Example) ... 1/4MUVVP6540UPE

1/4M UVVP 65 40 UPE

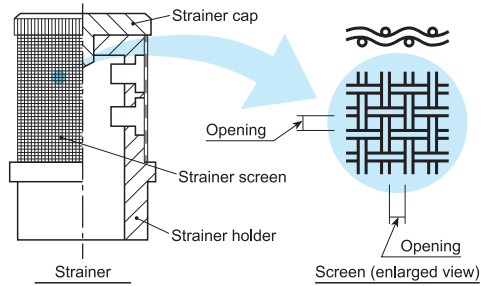
Spray Capacity Code  
40  
50

# Effective Use of Standard Flat Spray Nozzles

## Strainer Mesh Size

The strainer fitted inside the nozzle comprises strainer holder, strainer screen and strainer cap.

Strainer mesh size	Opening (mm)	Free passage diameter (mm)
#200	0.07	below 0.2
#150	0.10	0.3–0.4
#100	0.15	0.5–0.7
#50	0.30	0.8–0.9

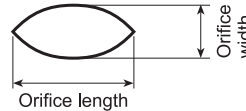


## Advantages and Disadvantages of Ceramic Nozzles

- CERJET® Ceramic Nozzle can resist most acids and strong corrosive liquid except for hydrofluoric acid and strong alkalis (pH 12 or higher).
- CERJET® Ceramic Nozzle has high wear resistance (its hardness Mohs scale 7), several hundred times that of brass and 20–30 times that of stainless steel. It is well-suited for high pressure cleaning. However, it is brittle and may crack by quenching or sudden temperature drops of more than 200°C.
- For attaching the ceramic orifice to the metal body or retainer, epoxy resin adhesive (Araldite®) is used. In applications where epoxy resin is not suitable, CERTIIM® with the ceramic orifice inserted into a plastic body or retainer by injection molding is recommended.

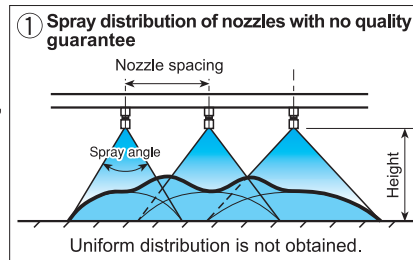
## Free Passage Diameter

The standard flat spray nozzle orifice has a cat-eye shape. The free passage diameter is the orifice width multiplied with a safety factor.



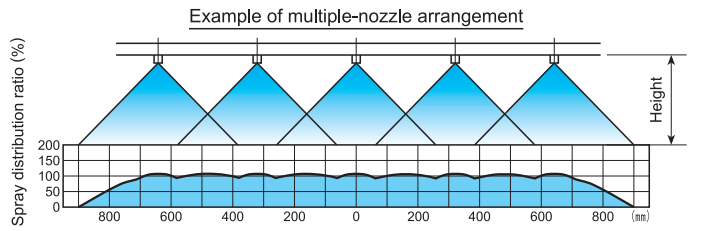
## Spray Distribution

The standard flat spray nozzles are designed to produce a mountain-shaped distribution in order to obtain a uniform spray distribution in a multiple-nozzle arrangement. Although the distribution depends on spray height, nozzle spacing, liquid pressure and liquid nature, you need spray nozzles guaranteed in spray performance to get the desired superimposed spray distribution. IKEUCHI nozzles have guaranteed spray angles and spray capacities in order to maintain uniform distribution.



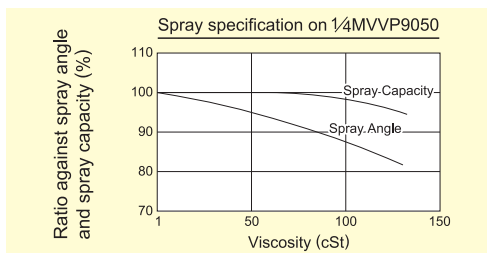
## 2 Spray distribution of nozzles guaranteed in spray performance

Uniform distribution is formed by overlapping mountain-shaped distributions.



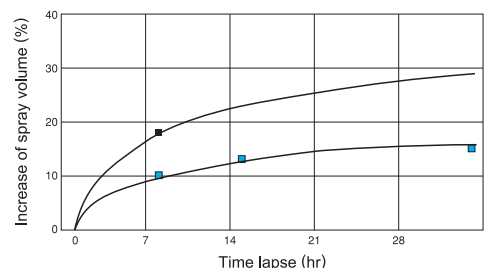
## Viscosity

There is a tendency for spray capacity and spray angle to be decreased and also for spray distribution to deteriorate if the viscosity of the liquid is increased. The resistance of liquid in the pipe is also increased. When spraying such liquids, pressure drop in the pipe must be also taken into consideration.



## Comparison of Wear-resistance

The comparison of wear-resistance between a UVVP series flat spray nozzle and our conventional type is shown here.



■ Conventional type  
■ UVVP series  
Pressure: 0.3 MPa  
Test liquid: Al<sub>2</sub>O<sub>3</sub> (#200) in water  
Percentage of Al<sub>2</sub>O<sub>3</sub>: 20wt%