Fine atomizing high-viscosity liquid spray

MMA Mini Atomizing Nozzle

Features
- Fine droplet.
- Capable of atomizing at micro flow rates.
- Large diameter of liquid orifice minimizes clogging, which is easy for cleaning.
- Applicable for high viscosity liquid.
- PEEK which is excellent in chemical resistance is adopted for MMA10-PEEK.

Material
Principal parts: SUS316L Stainless steel, PEEK (Model No. MMA10-PEEK)

Applications
- Spraying: sterilization/deodorant liquid, mold release agent, lubricant, etc.
- Humidity regulation: manufacturing paper products, electronics components, etc.
- Precision cleaning: wafers, glass substrates, automotive parts, etc.
- Coating: chemical liquid, oils, sauces, etc.

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Liquid orifice diameter [mm]</th>
<th>Air flow rate [L/min (nor)]</th>
<th>Water flow rate for proper atomization [mL/min]</th>
<th>Applicable tubing/fitting size</th>
<th>Operating temperature range [°C]</th>
<th>Weight [g]</th>
<th>Quick delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMA10-PEEK</td>
<td>1.1</td>
<td>10</td>
<td>1 to 20</td>
<td>φ-4</td>
<td>-5 to 60</td>
<td>26</td>
<td>○</td>
</tr>
<tr>
<td>MMA10</td>
<td>1.1</td>
<td>10</td>
<td>1 to 20</td>
<td>φ-4</td>
<td>-5 to 60</td>
<td>26</td>
<td>○</td>
</tr>
<tr>
<td>MMA30</td>
<td>1.5</td>
<td>30</td>
<td>3 to 60</td>
<td>φ-4</td>
<td>-5 to 60</td>
<td>26</td>
<td>○</td>
</tr>
<tr>
<td>MMA50</td>
<td>1.7</td>
<td>50</td>
<td>5 to 100</td>
<td>φ-4</td>
<td>-5 to 60</td>
<td>26</td>
<td>○</td>
</tr>
<tr>
<td>MMA100</td>
<td>2.4</td>
<td>100</td>
<td>20 to 200</td>
<td>Rc⅛</td>
<td>-5 to 60</td>
<td>55</td>
<td>○</td>
</tr>
<tr>
<td>MMA200</td>
<td>2.8</td>
<td>200</td>
<td>50 to 500</td>
<td>Rc⅛</td>
<td>-5 to 60</td>
<td>55</td>
<td>○</td>
</tr>
</tbody>
</table>

A separate device for flow control, such as a flow control valve, is required with MMA nozzles.
Please use Everloy’s ON/OFF Valve with Flow Control or a commercially available flow control valve (as described under “How to Control Flow”). (Contact us about usage conditions when atomizing high-viscosity liquids.)

Shapes and dimensions

<table>
<thead>
<tr>
<th>MMA10-PEEK</th>
<th>MMA10, 30, 50</th>
<th>MMA100, 200</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
</tbody>
</table>
Performance data

1. Particle size and velocity characteristics

- **Arithmetic mean particle size characteristics**
- **Sauter mean particle size characteristics**
- **Particle velocity characteristics**

![Graphs showing particle size and velocity characteristics for MMA 10, 30, 50, and MMA 100, 200.]

**Measurement conditions**
- Spray distance: 300 mm
- Measuring position: Center of spray
- Water flow rate: Max./Min. water flow rate for proper atomization (Ref. Specifications) per model number

2. Air flow rate characteristics

![Graphs showing air flow rate characteristics for MMA 10, 30, 50, and MMA 100, 200.]

**Measurement conditions**
- Spray distance: 300 mm
- Measuring position: Center of spray

**EVERLOY SPRAY NOZZLES**
3. Spray width at minimum water flow rate

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Spray width [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W1</td>
</tr>
<tr>
<td>MMA10</td>
<td>40 to 50</td>
</tr>
<tr>
<td>MMA30</td>
<td>35 to 45</td>
</tr>
<tr>
<td>MMA50</td>
<td>35 to 45</td>
</tr>
<tr>
<td>MMA100</td>
<td>35 to 45</td>
</tr>
<tr>
<td>MMA200</td>
<td>35 to 45</td>
</tr>
</tbody>
</table>

Measurement condition
Air pressure: 0.3 MPa
Amount of water for atomization: Min. amount of water for proper atomization

Typical use example

*Make sure the water head difference is no more than 1000 mm.

Check the below link or scan here for more detail or other nozzles.
ON/OFF Valve with Flow Control (for MMA10, 30, and 50)

Features
In controls ON/OFF of spray by air pressure.
Fine adjustment of spray flow rate is possible.

Material
Principal parts: SUS316L Stainless steel

Simple flow rate control type (compact MOV model)

Precise flow rate control type (MOV-MH model with micro-meter head)

Basic specifications

Typical use example

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Shapes, dimensions and materials of our products are subject to change without prior notice.