Non-filter oil mist collector  OMC-N2 series

Structure & mechanism

Original technology enabled high collection rate with no filter

Structure

- **Exhaust port**
  Large exhaust port slows down the speed of outgoing air to prevent oil scattering.

- **Primary treatment part**
- **Impinging plate**
- **Oil drain port**
- **Access door**
  Allows access to Collection unit from either side of MISTCATCH

**Clean air**

- **Rectifying plate/demistor**
  Captures oil droplets to prevent them from scattering outside the exhaust port.
  (OMC-N21S(H) and OMC-N22S(H) only)

- **Motor**
  Top Runner Motor
  Oil seal on the motor axis prevents oil entry into motor interior

**Oil mist-laden air**

**Collection unit**

**Turbo fan**
**Mechanism**

1. Oil mist flows along the impinging plate. At the primary treatment part, cutting dust and large particles are removed.
2. Turbo fan accelerates the air speed to blow it in the centrifugal direction to let the oil particles hit against the collection unit.
3. Oil particles adhered to the collection unit are gathered on the inner wall by centrifugal force to be discharged from the drain port in the form of liquid.
4. Clean air goes out.

**Product Point 1**

Primary treatment using inertial collision and centrifugal force

The incoming air hits against the Impinging plate and then rotates along the inner wall of the primary treatment part. Large particles and dust are separated from the air during this process.

**Product Point 2**

Collection unit with ultimate level of colliding force

The collection unit causes more oil particles to collide to achieve higher collection efficiency. OMC-N2**H** models lead the non-filter oil mist collectors in collection rate by its optimized design.
OMC-N205 (H)

Industry-leading collection efficiency as a non-filter unit

Model/Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>OMC-N205</th>
<th>OMC-N205H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. airflow</td>
<td>4.5 m³/min</td>
<td></td>
</tr>
<tr>
<td>Max. static pressure</td>
<td>0.59/0.85kPa</td>
<td></td>
</tr>
<tr>
<td>Collection efficiency</td>
<td>99% or more (2µm or larger)</td>
<td>99% or more (1µm or larger)</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>3-phase, 200VAC, 50Hz/200-220V, 60Hz</td>
<td></td>
</tr>
<tr>
<td>Motor output rating</td>
<td>0.4kW (2P)</td>
<td></td>
</tr>
<tr>
<td>Motor efficiency</td>
<td>76.0 - 76.0 - 77.0%</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>1.9/1.7 - 1.7A</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>0 to +40°C</td>
<td></td>
</tr>
<tr>
<td>Max. working humidity</td>
<td>85%RH, free from condensation</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>66/70dB (A)</td>
<td></td>
</tr>
<tr>
<td>Max. suction air temp.</td>
<td>+80°C</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent)</td>
<td></td>
</tr>
<tr>
<td>Suction port diameter</td>
<td>φ 98mm</td>
<td></td>
</tr>
<tr>
<td>Paint color</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>25.0kg</td>
<td></td>
</tr>
<tr>
<td>Drain port</td>
<td>φ 31 pipe</td>
<td></td>
</tr>
<tr>
<td>Standard accessory</td>
<td>2m φ 32 drain hose, 1 drain hose band, 4 anti-bibration rubber, 1 maintenance sticker, 1 instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

*1 Rated value in 25°C air temperature
*2 Efficiency value in a motor single body

Caution

- Be sure to read the instruction manual carefully before use.
- This product is intended for collecting general watersoluble and oil mist that generates during production process using various machine tools. Never have it inhale the following substances:
  - Ignition sources and fire sparks generated in machine processing
  - Flammable substances such as gasoline, thinner, benzine, kerosene and others as well as oil and cleaning liquid with an ignition point 80 degrees C or below,
  - Explosive substances such as aluminium, magnesium and titan as well as materials ridden with these substances,
  - Flammable liquid, mist and materials ridden with these substances,
  - Corrosive and adhesive substances and hazardous gas or air with a lot of unusual substances
  - Dust
  - Hot air exceeding 80 deg. C.
  - Large amount of liquid
  - Substances that remarkably accelerate rusting of metals or againg of plastics
- This product should not be used in an atmosphere which contains chlorine, sulfonic or fluorine gasses, oxalic acid, xylene, or methyl trichloride and the like.
- Tampering or repairing the product should be strictly avoided. Please contact us for repairing service.
- Precision apparatuses should not be arranged near the exhaust port where fine particles may fall on.
- Use only indoor.
- The altitude of the site of use should be lower than 1000m.
- The site of use should be free from vibration or impact.
- Electrical works required for mounting the product should be done by professionals or qualified personnel.
- Make sure that the packaging is not damaged on delivery. Damages during transportation may lead to product failure. In case any damage is found, contact us immediately.
**Maintenance**

1. Remove the screw with a screwdriver.
2. Unlatch the door to open.
3. Unfix the fasteners of the collection unit.
4. Take out the collection unit to clean using a brush or compressed air.

**Outline drawing**

**Main unit**
- Terminal box
- Maintenance space (either left or right side): 330 or more

**Mounting cutout**
- 4-φ 10 or M8

**Anti-vibration rubber (Accessory)**

**Collection rate**

- **Test oil**: Water-insoluble cutting oil
- **Measured by**: Low Volume Air Sampler type AN-200

**Option**

- **Auto-cleaning unit**: Keeps MISTCATCH interior clean using water and compressed air.
- **Duct flange**
- **Duct hose**

**Option**

- **For options**: See P035
# Model/Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>OMC-N210</th>
<th>OMC-N210H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. airflow</td>
<td>8.10 m³/min</td>
<td></td>
</tr>
<tr>
<td>Max. static pressure</td>
<td>1.13 / 1.55 kPa</td>
<td></td>
</tr>
<tr>
<td>Collection efficiency</td>
<td>99% or more (2μm or larger)</td>
<td>99% or more (1μm or larger)</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>3-phase, 200VAC, 50Hz/200-220V, 60Hz</td>
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</tr>
<tr>
<td>Motor output rating</td>
<td>0.75kW (2P)</td>
<td></td>
</tr>
<tr>
<td>Motor efficiency</td>
<td>81.5% / 81.1-82.5% IE3 / IE3-IE3</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>3.1 / 3.0-2.8A</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>0 to +40°C</td>
<td></td>
</tr>
<tr>
<td>Max. working humidity</td>
<td>85%RH, free from condensation</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>7074dB(A)</td>
<td></td>
</tr>
<tr>
<td>Max. suction air temp.</td>
<td>+80°C</td>
<td></td>
</tr>
<tr>
<td>EMD</td>
<td>EMI-EM61000-6-4, EMS:EN61000-6-2</td>
<td></td>
</tr>
<tr>
<td>Suction port diameter</td>
<td>φ123mm</td>
<td></td>
</tr>
<tr>
<td>Paint color</td>
<td>Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>40.0kg</td>
<td></td>
</tr>
<tr>
<td>Drain port</td>
<td>φ31 pipe</td>
<td></td>
</tr>
<tr>
<td>Standard accessory</td>
<td>2m φ32 drain hose, 1 drain hose band, 4 anti-vibration rubber, 1 maintenance sticker, 1 instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

**Caution**

- Be sure to read the instruction manual carefully before use.
- This product is intended for collecting general watersoluble and oil mist that generates during production process using various machine tools. Never have it inhale the following substances.
  - Ignition sources and fire sparks generated in machine processing
  - Flammable substances such as gasoline, thinner, benzine, kerosene and others as well as oil and cleaning liquid with an ignition point 80 degrees C or below,
  - Explosive substances such as aluminium, magnesium and titan as well as materials ridden with those substances,
  - Flammable liquid, mist and materials ridden with these substances,
  - Corrosive and adhesive substances and hazardous gas or air with a lot of unusual substances
  - Dust
  - Hot air exceeding 80 deg. C.
  - Large amount of liquid
  - Substances that remarkably accelerate rusting of metals or aging of plastics
- This product should not be used in an atmosphere which contains chlorine, sulfuric or fluorine gasses, oxalic acid, xylene, or methyl tetrachloride and the like.
- Tampering or repairing the product should be strictly avoided. Please contact us for repairing service.
- Precision apparatuses should not be arranged near the exhaust port where fine particles may fall on.
- Do not operate the product with its terminal box uncovered.
- Electrical connection should be done via an appropriate circuit breaker.
- Indoor use only. The altitude of the site of use should be lower than 1000m.
- The site of use should be free from vibration or impact.
- Electrical works required for mounting the product should be done by professionals or qualified personnel.
- Make sure that the packaging is not damaged on delivery. Damages during transportation may lead to product failure. In case any damage is found, contact us immediately.
**Maintenance**

1. Remove the screw with a screw driver.
2. Unlatch the door to open.
3. Unfix the fasters of the collection unit.
4. Take out the collection unit to clean using a brush or compressed air.

**Outline drawing**

**Main unit**
- Terminal box
- Maintenance space (Either left or right side) 400 or more

**Mounting cutout**
- Dimensions provided

**Anti-vibration rubber (Accessory)**

**Collection rate**
- Test oil: Water-insoluble cutting oil
- Measured by: Low Volume Air Sampler type AN-200

**Option**
- Auto-cleaning unit
  - Keeps MISTCATCH interior clean using water and compressed air.

**Parameters**
- Non-filter type
- OMC-N210H
- OMC-N210

**Graph**
- Collection efficiency vs. particle diameter
- Non-filter type
- OMC-N210H
- OMC-N210

**Dimensions**
- Drain pipe: OD φ 31 Rp3/4 in.
- Eyebolt: φ 25
- Brake: φ 12.7

**For options**
- Duct flange
- Duct hose

**See**
- P035
**Non-filter Oil mist collector**

**OMC-N215(H)**

Industry-leading collection efficiency as a non-filter unit

<table>
<thead>
<tr>
<th>Model</th>
<th>OMC-N215</th>
<th>OMC-N215H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. airflow</td>
<td>14.5/16.5m³/min</td>
<td></td>
</tr>
<tr>
<td>Max. static pressure</td>
<td>1.57/2.17kPa</td>
<td></td>
</tr>
<tr>
<td>Collection efficiency</td>
<td>99% or more (2μm or larger)</td>
<td>99% or more (1μm or larger)</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>3-phase, 200VAC, 50Hz/200-220V, 60Hz</td>
<td></td>
</tr>
<tr>
<td>Motor output rating</td>
<td>1.5kW (2P)</td>
<td></td>
</tr>
<tr>
<td>Motor efficiency</td>
<td>85.8/85.6-86.0% IE3/IE3-IE3</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>5.6/5.6-5.1A</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>0 to +40°C</td>
<td></td>
</tr>
<tr>
<td>Max. working humidity</td>
<td>85%RH, free from condensation</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>72/76dB(A)</td>
<td></td>
</tr>
<tr>
<td>Max. suction air temp.</td>
<td>+80°C</td>
<td></td>
</tr>
<tr>
<td>Conformity</td>
<td></td>
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</tr>
<tr>
<td>EMC directive</td>
<td>EN ISO/12100 : 2010 EMI:EN61000-6-4 EMS:EN61000-6-2</td>
<td></td>
</tr>
<tr>
<td>EMD</td>
<td>EN60204-1 : 2006+A1 : 2009 Overvoltage category II, Pollution level 3</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>RoHS</td>
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<tr>
<td>Suction port diameter</td>
<td>φ148mm</td>
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</tr>
<tr>
<td>Paint color</td>
<td>Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>57.0kg</td>
<td></td>
</tr>
<tr>
<td>Drain port</td>
<td>φ31 pipe</td>
<td></td>
</tr>
<tr>
<td>Standard accessory</td>
<td>2m φ32 drain hose, 1 drain hose band, 4 anti-bibration rubber, 1 maintenance sticker, 1 instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

*1 Rated value in 25°C air temperature

*2 Efficiency value in a motor single body

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**Caution**

- Be sure to read the instruction manual carefully before use.
- This product is intended for collecting general watersoluble and oil mist that generates during production process using various machine tools. Never have it inhale the following substances.
  - Ignition sources and fire sparks generated in machine processing
  - Flammable substances such as gasoline, thinner, benzol, kerosene and others as well as oil and dancing liquid with an ignition point 80 degrees C or below,
  - Explosive substances such as aluminium, magnesium and titan as well as materials ridden with those substances,
  - Flammable liquid, mist and materials ridden with these substances,
  - Corrosive and adhesive substances and hazardous gas or air with a lot of unusual substances
  - Dust
  - Hot air exceeding 80 deg. C.
  - Large amount of liquid
  - Substances that remarkably accelerate rusting of metals or ageing of plastics
- This product should not be used in an atmosphere which contains chlorine, sulfuric or fluorine gasses, oxalic acid, xylene, or methyl tetrachloride and the like.
- Tampering or repairing the product should be strictly avoided. Please contact us for repairing service.
- Precision apparatuses should not be arranged near the exhaust port where fine particles may fall on.
- Electrical connection should be done via an appropriate circuit breaker.
- Indoor use only. The altitude of the site of use should be lower than 1000m.
- Electrical works required for mounting the product should be done by professionals or qualified personnel.
- Make sure that the packaging is not damaged on delivery. Damages during transportation may lead to product failure. In case any damage is found, contact us immediately.

---

**Model/Specifications**

- **Rated value in 25°C air temperature**
- **Efficiency value in a motor single body**
**Maintenance**

1. Remove the screw with a screwdriver.
2. Un latch the door to open.
3. Unfix the fasteners of the collection unit.
4. Take out the collection unit to clean using a brush or compressed air.

**Outline drawing**

**[Main unit]**

- Terminal box
- Maintenance space (Either left or right side) 470 or more
- Eye bolt M8
- Drain pipe OD ø31
- Exhaust
- Make

**Mounting cutout**

**Anti-vibration rubber (Accessory)**

**Collection rate**

- Test oil: Water-insoluble cutting oil
- Measured by: Low Volume Air Sampler type AN-200

**Option**

- Auto-cleaning unit
  - Keeps MISTCATCH interior clean using water and compressed air.

<table>
<thead>
<tr>
<th>Option</th>
<th>P033</th>
<th>For options</th>
<th>P035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duct flange</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct hose</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Non-filter Oil mist collector

OMC-N225(H)

Industry-leading collection efficiency as a non-filter unit

**Model/Specifications**

<table>
<thead>
<tr>
<th></th>
<th>OMC-N225</th>
<th>OMC-N225H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>OMC-N225</td>
<td>OMC-N225H</td>
</tr>
<tr>
<td>Max. airflow</td>
<td>21.5/24.5m³/min</td>
<td></td>
</tr>
<tr>
<td>Max. static pressure</td>
<td>1.88/2.57kPa</td>
<td></td>
</tr>
<tr>
<td>Collection efficiency</td>
<td>99% or more (2μm or larger)</td>
<td>99% or more (1μm or larger)</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>3-phase, 200VAC, 50Hz/200-220V, 60Hz</td>
<td></td>
</tr>
<tr>
<td>Motor output rating</td>
<td>2.2kW (2P)</td>
<td></td>
</tr>
<tr>
<td>Motor efficiency</td>
<td>86.0/86.8-86.9% IE3/IE3-IE3</td>
<td></td>
</tr>
<tr>
<td>Current consumption</td>
<td>8.3/8.1-7.4A</td>
<td></td>
</tr>
<tr>
<td>Working temperature</td>
<td>0 to +40°C</td>
<td></td>
</tr>
<tr>
<td>Max. working humidity</td>
<td>85%RH, free from condensation</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>74/78dB(A)</td>
<td></td>
</tr>
<tr>
<td>Max. suction air temp.</td>
<td>+80°C</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>RoHS</td>
<td></td>
</tr>
<tr>
<td>Suction port diameter</td>
<td>φ 198mm</td>
<td></td>
</tr>
<tr>
<td>Paint color</td>
<td>Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>68.0kg</td>
<td></td>
</tr>
<tr>
<td>Drain port</td>
<td>φ 31 pipe</td>
<td></td>
</tr>
<tr>
<td>Standard accessory</td>
<td>2m φ 32 drain hose, 1 drain hose band, 4 anti-bibration rubber, 1 maintenance sticker, 1 instruction manual</td>
<td></td>
</tr>
</tbody>
</table>

**Caution**

- Be sure to read the instruction manual carefully before use.
- This product is intended for collecting general watersoluble and oil mist that generates during production process using various machine tools. Never have it inhale the following substances.
  - Ignition sources and fire sparks generated in machine processing
  - Flammable substances such as gasoline, thinner, benzyl, kerosene and others as well as oil and cleaning liquid with an ignition point 80 degrees C or below,
  - Explosive substances such as aluminium, magnesium and titan as well as materials riddled with those substances,
  - Flammable liquid, mist and materials riddled with these substances,
  - Corrosive and adhesive substances and hazardous gas or air with a lot of unusual substances,
  - Dust
  - Hot air exceeding 80 deg. C.
  - Large amount of liquid
  - Substances that remarkably accelerate rusting of metals or ageing of plastics
- This product should not be used in an atmosphere which contains chlorine, sulfuric or fluorine gasses, oxalic acid, xylene, or methyl tetrachloride and the like.
- Tampering or repairing the product should be strictly avoided. Please contact us for repairing service.
- Precision appaatuses should not be arranged near the exhaust port where fine particles may fall on.
- Do not operate the product with its terminal box uncovered.
- Electrical connection should be done via an appropriate circuit breaker
- The altitude of the site of use should be lower than 1000m.
- Indoor use only. The site of use should be free from vibration or impact.
- Electrical works required for mounting the product should be done by professionals or qualified personnel.
- Make sure that the packaging is not damaged on delivery. Damages during transportation may lead to product failure. In case any damage is found, contact us immediately.
**Maintenance**

1. Remove the screw with a screw driver.
2. Unlatch the door to open.
3. Unfix the fasteners of the collection unit.
4. Take out the collection unit to clean using a brush or compressed air.

**Outline drawing**

- **Main unit**
  - Terminal box
  - Maintenance space (either left or right side) 500 or more

- **Mounting cutout**
  - 365
  - 360
  - 4 φ10 or M8

- **Anti-vibration rubber (Accessory)**
  - φ35
  - φ15
  - φ15

**Collection rate**

- **Test oil:** Water-insoluble cutting oil
- **Measured by:** Low Volume Air Sampler type AN-200

![Graph showing collection efficiency against particle diameter]

- **Non-filter type**
- **OMC-N225H**
- **OMC-N225**

**Option**

- **Auto-cleaning unit**
  - Keeps MISTCATCH interior clean using water and compressed air.
  - See P033

- **Duct flange**
- **Duct hose**
  - See P035
Non-filter Oil mist collector

OMC-11

(10m³/min)

Energy saving, high power and compact!

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  - Ignition sources and fire sparks generated in machine processing
  - Flammable substances such as gasoline, thinner, benzine, kerosene and others as well as oil and cleaning liquid with an ignition point 80 degrees C or below.
  - Explosive substances such as aluminum, magnesium and titan as well as materials ridden with those substances,
  - Corrosive and adhesive substances and hazardous gas or air with a lot of unusual substances
  - Dust
  - Hot air exceeding 50 deg. C.
  - Large amount of liquid
  - Substances that remarkably accelerate rusting of metals or aging of plastics

• This product should not be used in an atmosphere which contains chlorine, sulfuric or fluorine gasses, oxalic acid, xylene, or methyl tetrachloride and the like.
• Tampering or repairing the product should be strictly avoided. Please contact us for repairing service.
• Precision apparatuses should not be arranged near the exhaust port where fine particles may fall on.
• Electrical connection should be done via an appropriate circuit breaker.
• Indoor use only. The altitude of the site of use should be lower than 1000m.
• The site of use should be free from vibration or impact.
• Electrical works required for mounting the product should be done by professionals or qualified personnel.
• Make sure that the packaging is not damaged on delivery. Damages during transportation may lead to product failure. In case any damage is found, contact us immediately.

Model
OMC-11

| Max. airflow | 8 / 10m³/min |
| Collection efficiency | 83% ±3% (2μm or larger) |
| Rated voltage | 3-phase, 200VAC, 50Hz/200-220V, 60Hz |
| Motor output rating | 0.2kW (2P) |
| Current consumption | 1.0 / 1.3-1.3A or less |
| Working temperature | 0 to +40°C |
| Max. working humidity | 85%RH, free from condensation |
| Noise | 77dB(A) |
| Max. suction air temp. | +50°C |
| Suction port diameter | φ123mm |
| Paint color | Ivory (10GY9/1 equivalent) |
| Weight | 13.0kg |
| Standard accessory | 2m φ 18 drain hose, 1 drain hose band, 1 instruction manual |

*1 Rated value in 25°C air temperature
**Mechanism**

1. Oil-containing air is inhaled through the air intake from underneath of MIST CATCH by its rapidly spinning vane attached to the motor shaft.

2. The inhaled air flow is then accelerated by centrifugal force when passing through the numerous pores of the vane and collides against the inner wall of the MIST CATCH housing. This separates oil particles from the outgoing air.

3. By air spirals around the wall, oil particles sit on the inner wall drip along the wall surface down to the slits to be discharged from the drain pipe.

4. The outgoing air is returned to the atmosphere out of the air outlet.

**Outline drawing**

**Mounting cutout**

**Vane construction**

Material: TPX (Polymethylpentene)
Registered trademark of Mitsui Chemicals, Inc.

**Collection rate**

Test oil: Water-insoluble cutting oil
Measured by: Low Volume Air Sampler type AN-200

**Option**

- Duct flange
- SY band
- Duct hose

For options See P036