

MIST
CATCH

Non-filter
oil mist
collector

Electrostatic
oil mist
collector

Filter
oil mist
collector

Option

Auto-cleaning
unit

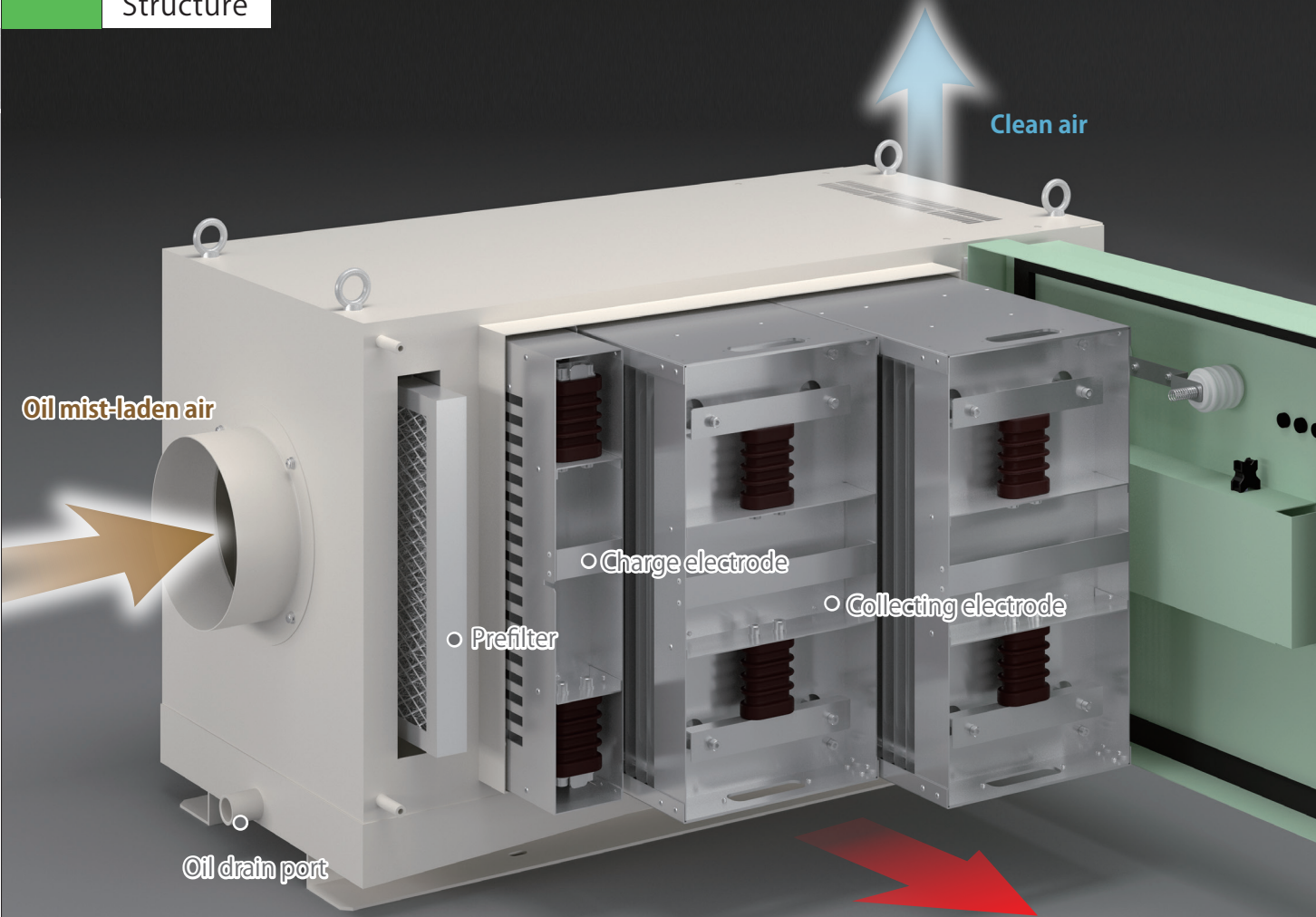
Electrostatic oil mist collector **OMC-E325**

Structure & mechanism

Original technology enabled suctioning of high concentration mist



Structure



Operation panel and lamp

Notifies abnormality and maintenance time by fulfilling monitoring function. The lamps are readily visible from a distant place.



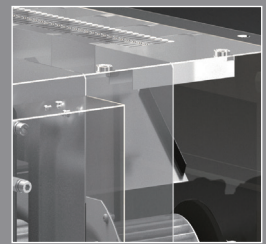
Electrode

Realized light weight by separating charge and collecting electrodes. Each electrode unit has handles which makes detachment easier. Designed for ease of maintenance work.



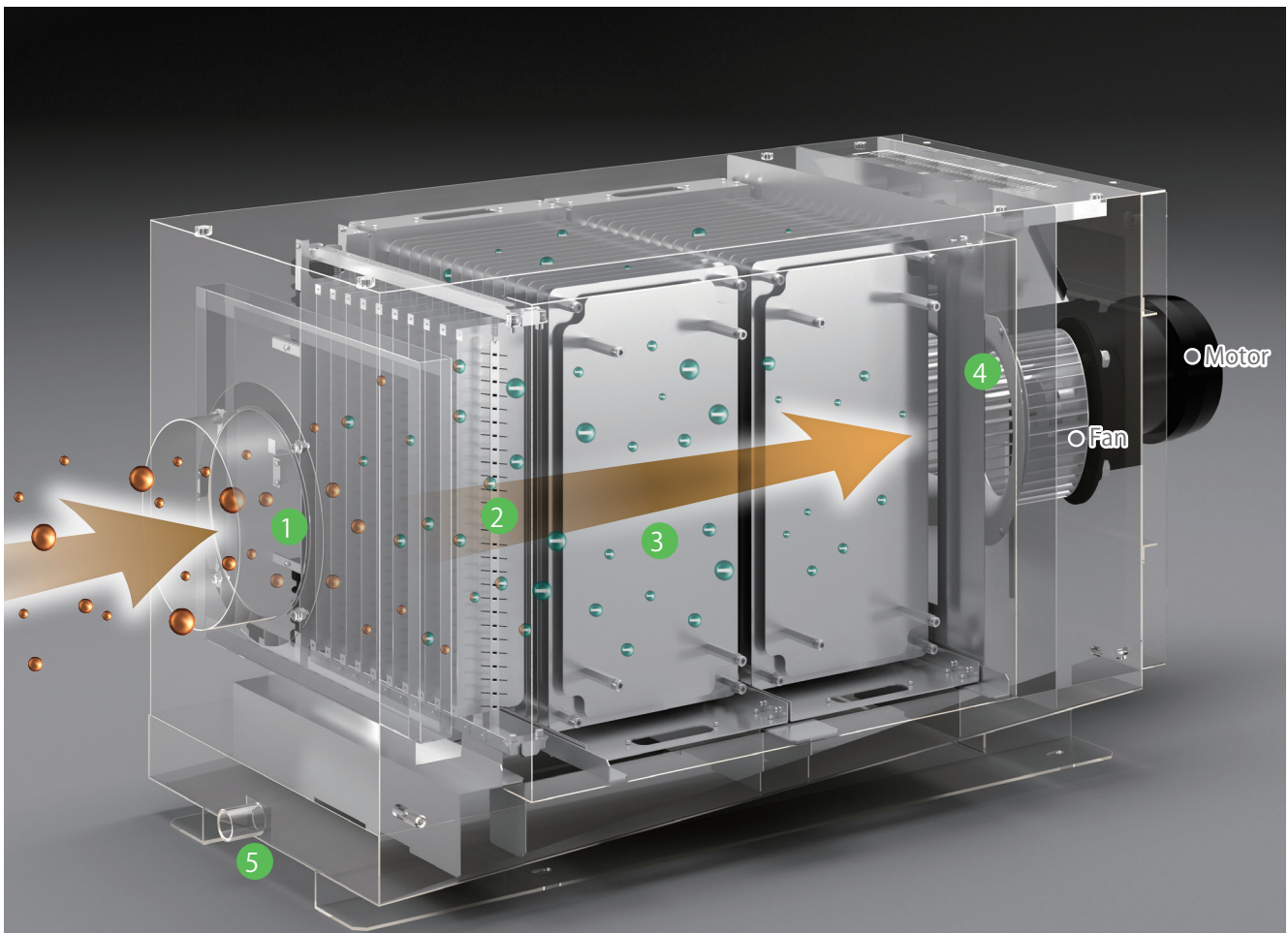
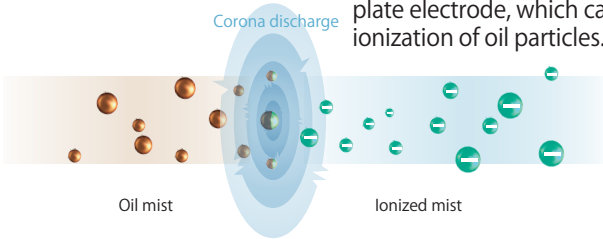
Rectification plate

Rectification plate guides air to go out straight up, which prevents working people and equipment from being exposed to exhaust air directly.



Mechanism

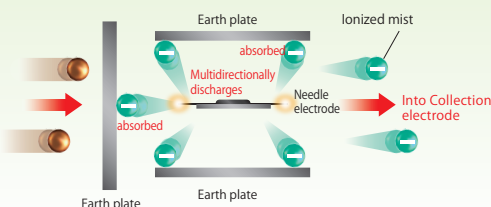
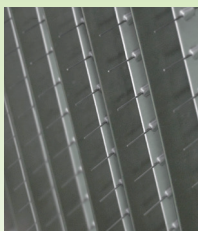
- Oil mist-laden air passes through the pre-filter and then goes into Charge electrode.
- At Charge electrode, corona discharge occurs between the high-voltage needle electrode and the grounded plate electrode, which causes ionization of oil particles.
- At Collection electrode, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles that ionized by electrostatic force.
- Particles escaped from the Electrode 1 are collected in the Electrode 2 and purified air is discharged from the fan.
- Collected particles are liquified and then discharged from the drain port.



Point 1

Wide angle-discharge of ion

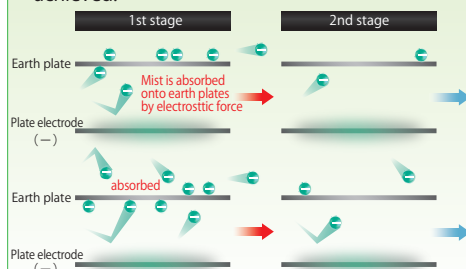
The uniquely designed needle electrodes realized multidirectional discharge. This largely expands discharge area of oil mist.



Point 2

Completely absorbs mist in two step

Enhanced mist absorption rate by enlarging plate surface area of collection electrode. In addition, 2-step collection system does not allow mist to escape. Amazingly high collection rate and mist concentration rate have been achieved.



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Option

Auto-cleaning
unit

Electrostatic Oil mist collector

OMC-E310

Up to 300mg/m³ mist concentration! Collection rate of more than 99%



RoHS

Collection method



Features



Model/Specifications

| | | |
|----------------------------------|--|--------------------|
| Model | OMC-E310 | |
| Max. airflow *1 | 7 / 8m ³ /min | |
| Collection efficiency | 99% or more (by gravimetric method) | |
| Type of mist collectable | Oil-based and water-soluble | |
| Rated voltage | 3-phase, 200VAC, 50/60Hz | |
| Motor output rating | 0.2kW (2P) | |
| Current consumption | 1.3 / 1.4A or less | |
| Power consumption | 240 / 320W or less | |
| Working temperature | 0 to +40°C | |
| Working humidity | 10 to 80%RH, free from condensation | |
| Noise | 74dB(A) | |
| Max. mist concentration | 300mg/m ³ | |
| Max. suction air temp. | +40°C | |
| Ozone concentration | Less than 0.04ppm | |
| Display | Power (White), Electrode energization (Orange), Electrode check (Red) | |
| External output | Alarm output 2c 250VAC 2A, 30VDC 2A | |
| Safety circuit | High voltage cutoff and motor stop in the event of frequent spark discharges, high voltage short circuit and door open | |
| Conformity | RoHS | |
| Suction port diameter | φ 148mm | |
| Drain port | φ 18 pipe | |
| High voltage output (switchable) | HV | DC-9kV, -8kV, -7kV |
| | LV | DC-6kV, -5kV, -4kV |
| Paint color | Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent) | |
| Weight | 51.0kg | |
| Standard accessory | 2m drain hose, 1 drain hose band, 1 instruction manual | |

*1 Rated value in 25°C air temperature

⚠ 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, benzin, 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 40 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.
- Do not connect an inverter to power supply. It can be a cause of product failure.
- Maintenance cycle may differ depending on the amount or components of oil mist.
- 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.

Mechanism

1

Oil mist-laden air goes into the Electrode 1.

2

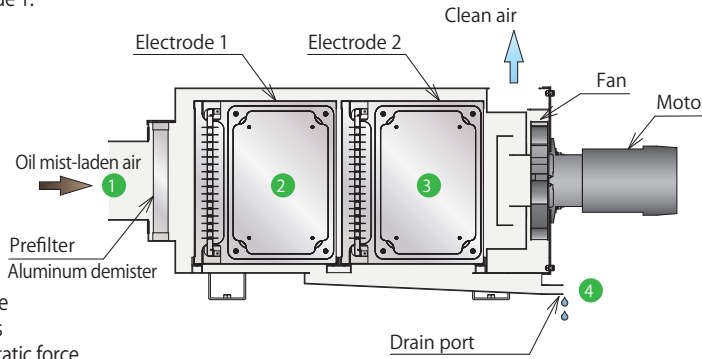
The electrode consists of charge part and collection part.
 At the charge part, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist.
 At the collection part, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles which have been ionized by electrostatic force.

3

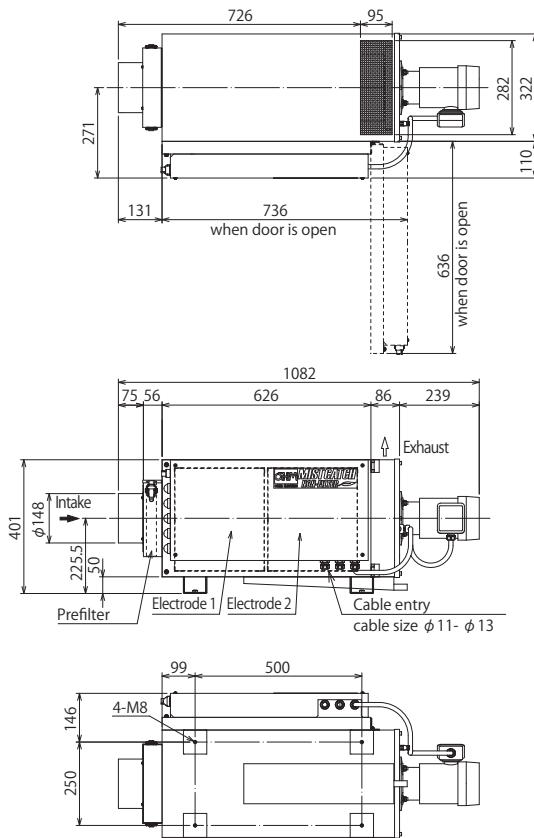
Particles escaped from the Electrode 1 will be collected in the Electrode 2 and purified air will be discharged from the fan.

4

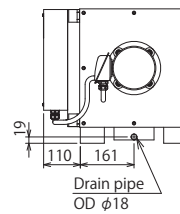
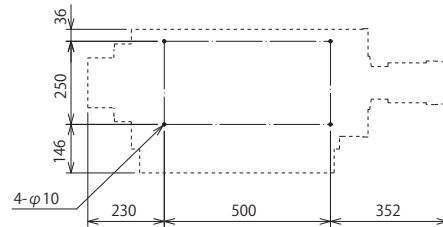
Collected oil particles are liquified and then discharged from the drain port.



Outline drawing

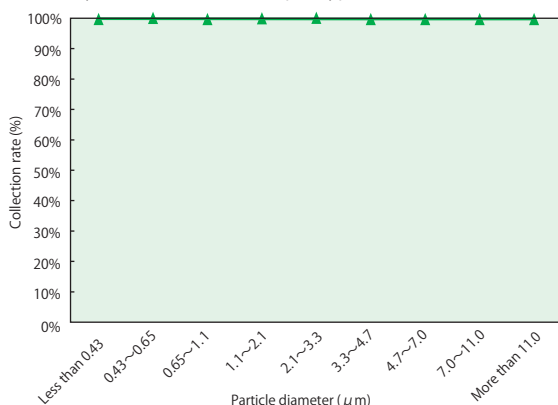


Mounting cutout

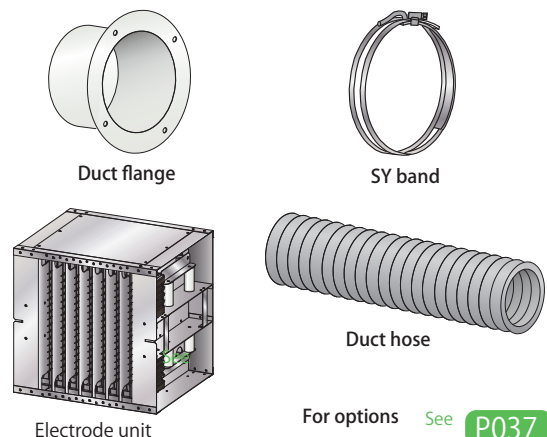


Collection rate

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



Option



For options See P037

MIST
CATCH

Non-filter
oil mist
collector

Electrostatic
oil mist
collector

Filter
oil mist
collector

Option

Auto-cleaning
unit

Electrostatic Oil mist collector

OMC-E315

Up to 300mg/m³ mist concentration! Collection rate of more than 99%



RoHS

Collection method



Features



Model/Specifications

| | | |
|----------------------------------|--|--------------------|
| Model | OMC-E315 | |
| Max. airflow *1 | 12 / 14m ³ /min | |
| Collection efficiency | 99% or more (by gravimetric method) | |
| Type of mist collectable | Oil-based and water-soluble | |
| Rated voltage | 3-phase, 200VAC, 50/60Hz | |
| Motor output rating | 0.4kW (2P) | |
| Current consumption | 1.7 / 1.9A or less | |
| Power consumption | 370 / 540W or less | |
| Working temperature | 0 to +40°C | |
| Working humidity | 10 to 80%RH, free from condensation | |
| Noise | 79dB(A) | |
| Max. mist concentration | 300mg/m ³ | |
| Max. suction air temp. | +40°C | |
| Ozone concentration | Less than 0.04ppm | |
| Display | Power (White), Electrode energization (Orange), Electrode check (Red) | |
| External output | Alarm output 2c 250VAC 2A, 30VDC 2A | |
| Safety circuit | High voltage cutoff and motor stop in the event of frequent spark discharges, high voltage short circuit and door open | |
| Conformity | RoHS | |
| Suction port diameter | φ 148mm | |
| Drain port | φ 18 pipe | |
| High voltage output (switchable) | HV | DC-9kV, -8kV, -7kV |
| | LV | DC-6kV, -5kV, -4kV |
| Paint color | Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent) | |
| Weight | 52.0kg | |
| Standard accessory | 2m drain hose, 1 drain hose band, 1 instruction manual | |

*1 Rated value in 25°C air temperature

⚠ 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, benzin, 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 40 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.
- Do not connect an inverter to power supply. It can be a cause of product failure.
- Maintenance cycle may differ depending on the amount or components of oil mist.
- 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.

Mechanism

1

Oil mist-laden air goes into the Electrode 1.

2

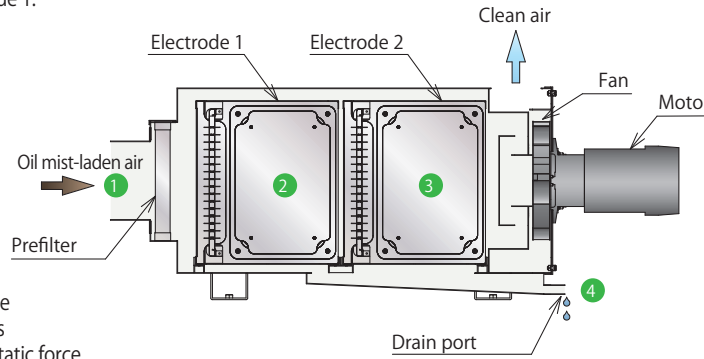
The electrode consists of charge part and collection part.
 At the charge part, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist.
 At the collection part, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles which have been ionized by electrostatic force.

3

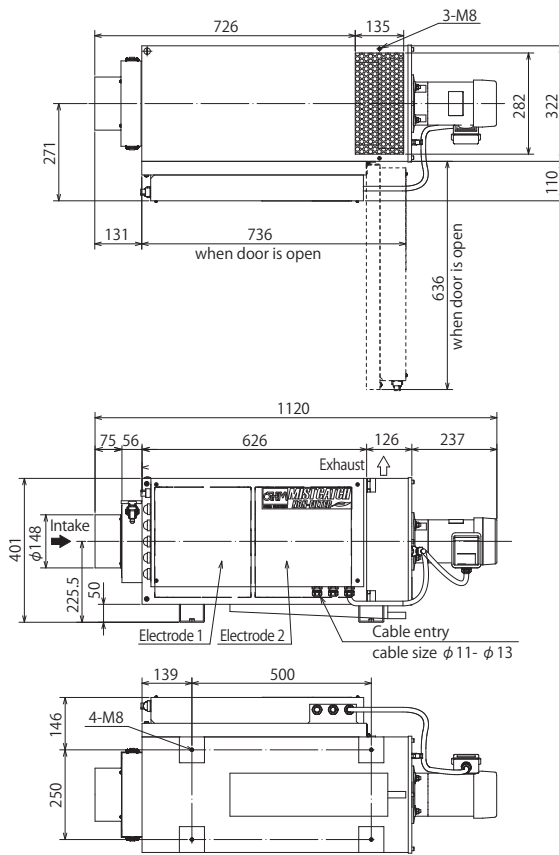
Particles escaped from the Electrode 1 will be collected in the Electrode 2 and purified air will be discharged from the fan.

4

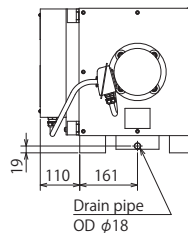
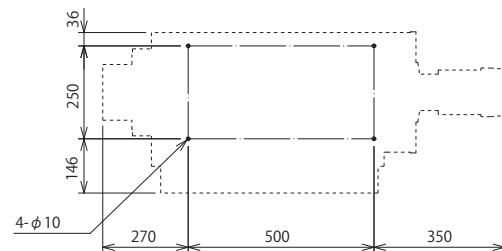
Collected oil particles are liquified and then discharged from the drain port.



Outline drawing

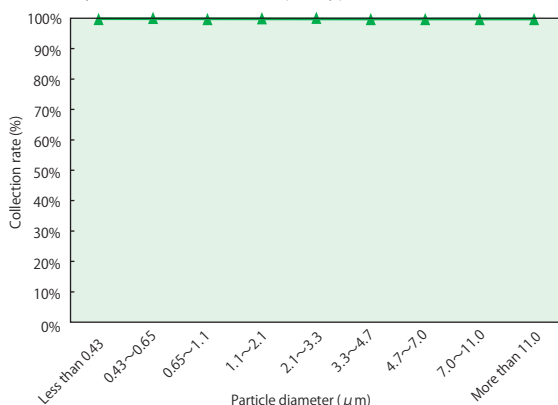


Mounting cutout

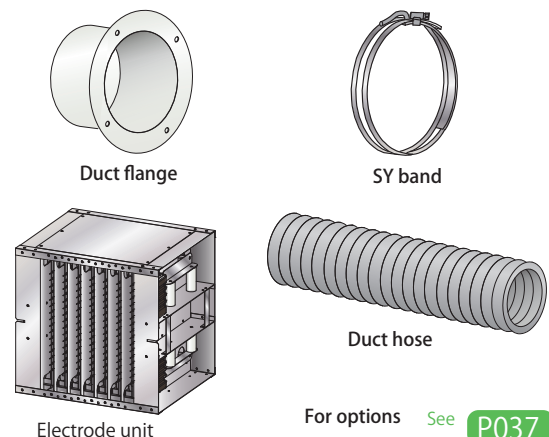


Collection rate

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



Option



For options See P037

MIST
CATCH

Non-filter
oil mist
collector

Electrostatic
oil mist
collector

Filter
oil mist
collector

Option

Auto-cleaning
unit

Electrostatic Oil mist collector

OMC-E325

Up to 300mg/m³ mist concentration! Collection rate of more than 99%



RoHS

Collection method



Features



Model/Specifications

| | |
|--------------------------|---|
| Model | OMC-E325 |
| Max. airflow *1 | 22 / 25m ³ /min |
| Max. static pressure *1 | 0.68 / 0.96kPa |
| Collection efficiency | 99% or more (by gravimetric method) |
| Type of mist collectable | Oil-based and water-soluble |
| Rated voltage | 3-phase, 200VAC, 50/60Hz |
| Motor output rating | 0.75kW (2P) |
| Motor efficiency *2 | 81.5 / 81.1% IE3 / IE3 |
| Current consumption *1 | 2.5 / 3.2A or less |
| Power consumption *1 | 590 / 900W or less |
| Working temperature | 0 to +40°C |
| Working humidity | 10 to 80%RH, free from condensation |
| Noise | 72dB(A) |
| Max. mist concentration | 300mg/m ³ |
| Max. suction air temp. | +40°C |
| Ozone concentration | Less than 0.04ppm |
| Display | POWER lamp (White), OPERATION lamp (Orange), ALARM lamp (Red) |
| External operation input | 24V DC Continuous signal |
| External output | Alarm output 1a (AC250VAC 2A, 30VDC 2A) ×2 |
| Safety circuit | High voltage cutoff and motor stop in the events of frequent sparking, high voltage short circuit, overcurrent, overcurrent on motor, abnormal heating of high voltage power board or door open |
| Conformity | RoHS |
| Suction port diameter | φ 198mm |
| Drain port | φ 31 pipe |
| High voltage output | Switchable on operation panel DC-9kV, -8kV, -7kV |
| Paint color | Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent) |
| Weight | 108.0kg |
| Standard accessory | 2m φ32 drain hose, 1 drain hose band, 1 instruction manual |

*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, benzin, 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 40 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.
- Do not connect an inverter to power supply. It can be a cause of product failure.
- Maintenance cycle may differ depending on the amount or components of oil mist.
- 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.

Mechanism

1

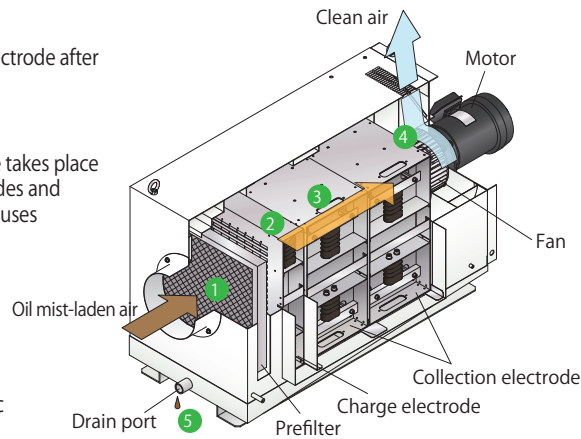
Oil mist-laden air goes into the charge electrode after passing through the Prefilter.

2

At the charge electrode, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist.

3

At the collection part, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles which have been ionized by electrostatic force.



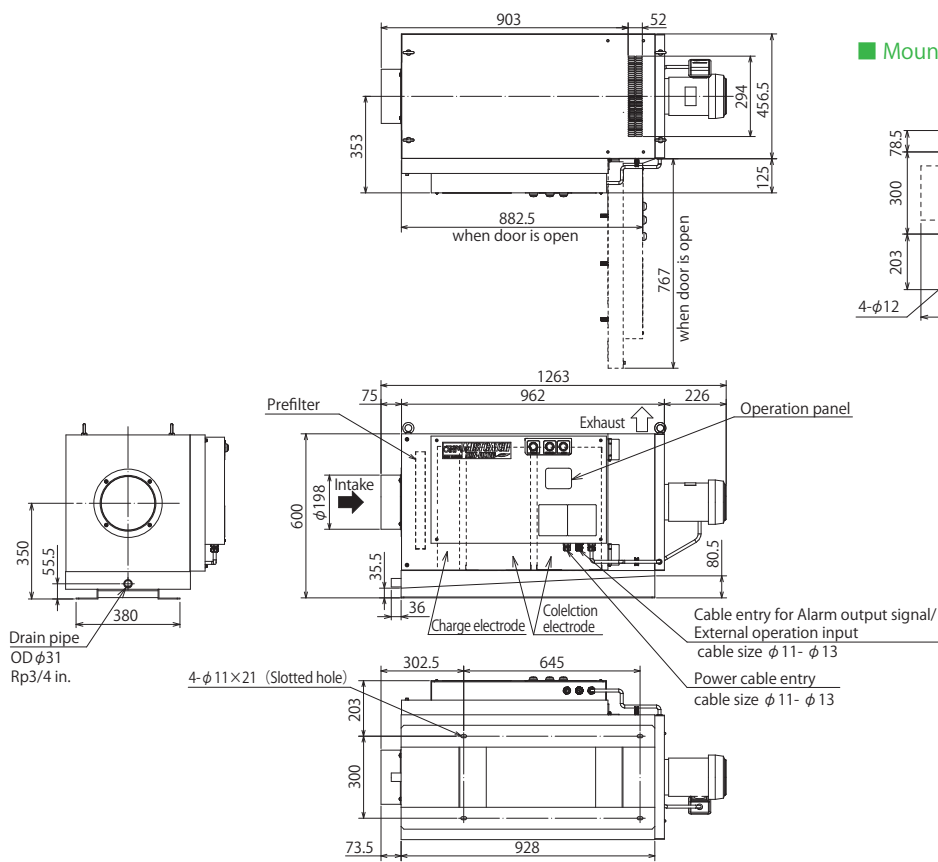
4

Particles escaped from the 1st Collection electrode will be collected in the 2nd electrode and purified air will be discharged from the fan.

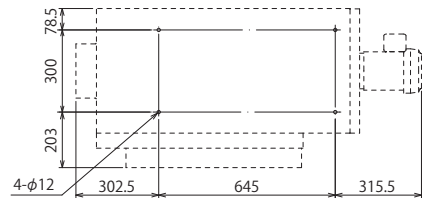
5

Collected oil particles are liquified and then discharged from the drain port.

Outline drawing

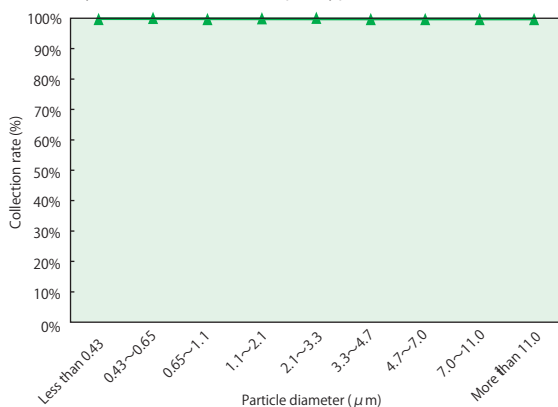


Mounting cutout

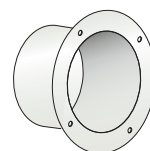


Collection rate

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



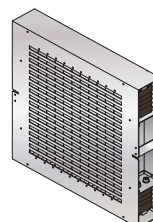
Option



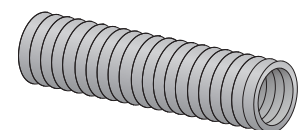
Duct flange



SY band



Charge electrode



Duct hose

For options See **P037**

MIST
CATCH

Non-filter
oil mist
collector

Electrostatic
oil mist
collector

Filter
oil mist
collector

Option

Auto-cleaning
unit

Electrostatic Oil mist collector

OMC-E345

Up to 300mg/m³
mist concentration!
Collection rate of
more than 99%



RoHS

Collection method



Features



Model/Specifications

| | |
|------------------------------------|---|
| Model | OMC-E345 |
| Max. airflow ^{*1} | 40 / 45m ³ /min |
| Max. static pressure ^{*1} | 0.86 / 1.21kPa |
| Collection efficiency | 99% or more (by gravimetric method) |
| Type of mist collectable | Oil-based and water-soluble |
| Rated voltage | 3-phase, 200VAC, 50/60Hz |
| Motor output rating | 1.5kW (2P) |
| Motor efficiency ^{*2} | 85.8 / 85.6% IE3 / IE3 |
| Current consumption ^{*1} | 4.2 / 5.8A or less |
| Power consumption ^{*1} | 1090 / 1730W or less |
| Working temperature | 0 to +40°C |
| Working humidity | 10 to 80%RH, free from condensation |
| Noise | 75dB(A) |
| Max. mist concentration | 300mg/m ³ |
| Max. suction air temp. | +40°C |
| Ozone concentration | Less than 0.04ppm |
| Display | POWER lamp (White), OPERATION lamp (Orange), ALARM lamp (Red) |
| External operation input | 24V DC Continuous signal |
| External output | Alarm output 1a (AC250VAC 2A, 30VDC 2A) ×2 |
| Safety circuit | High voltage cutoff and motor stop in the events of frequent sparking, high voltage short circuit, overcurrent, overcurrent on motor, abnormal heating of high voltage power board or door open |
| Conformity | RoHS |
| Suction port diameter | φ 200mm in three places |
| Drain port | φ 31 pipe |
| High voltage output | Switchable on operation panel DC-9kV, -8kV, -7kV |
| Paint color | Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent) |
| Weight | 185.0kg |
| Standard accessory ^{*3} | 2m φ 32 drain hose, 1 drain hose band, 1 instruction manual |

*1 Rated value in 25°C air temperature

*2 Efficiency value in a motor single body

*3 Duct connecting port is not included

⚠ Caution

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 - 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 40 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.
- Do not connect an inverter to power supply. It can be a cause of product failure.
- Maintenance cycle may differ depending on the amount or components of oil mist.
- 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.

Mechanism

1

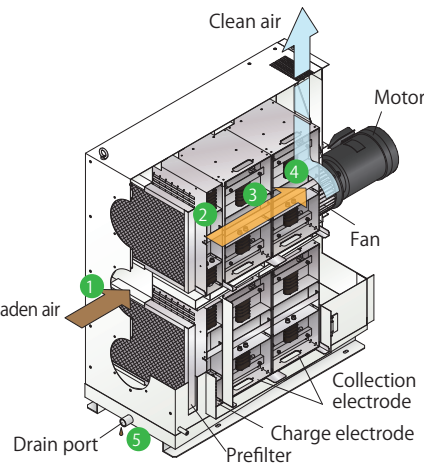
Oil mist-laden air goes into the charge electrode after passing through the Prefilter.

2

At the charge electrode, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist.

3

At the collection part, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles which have been ionized by electrostatic force.



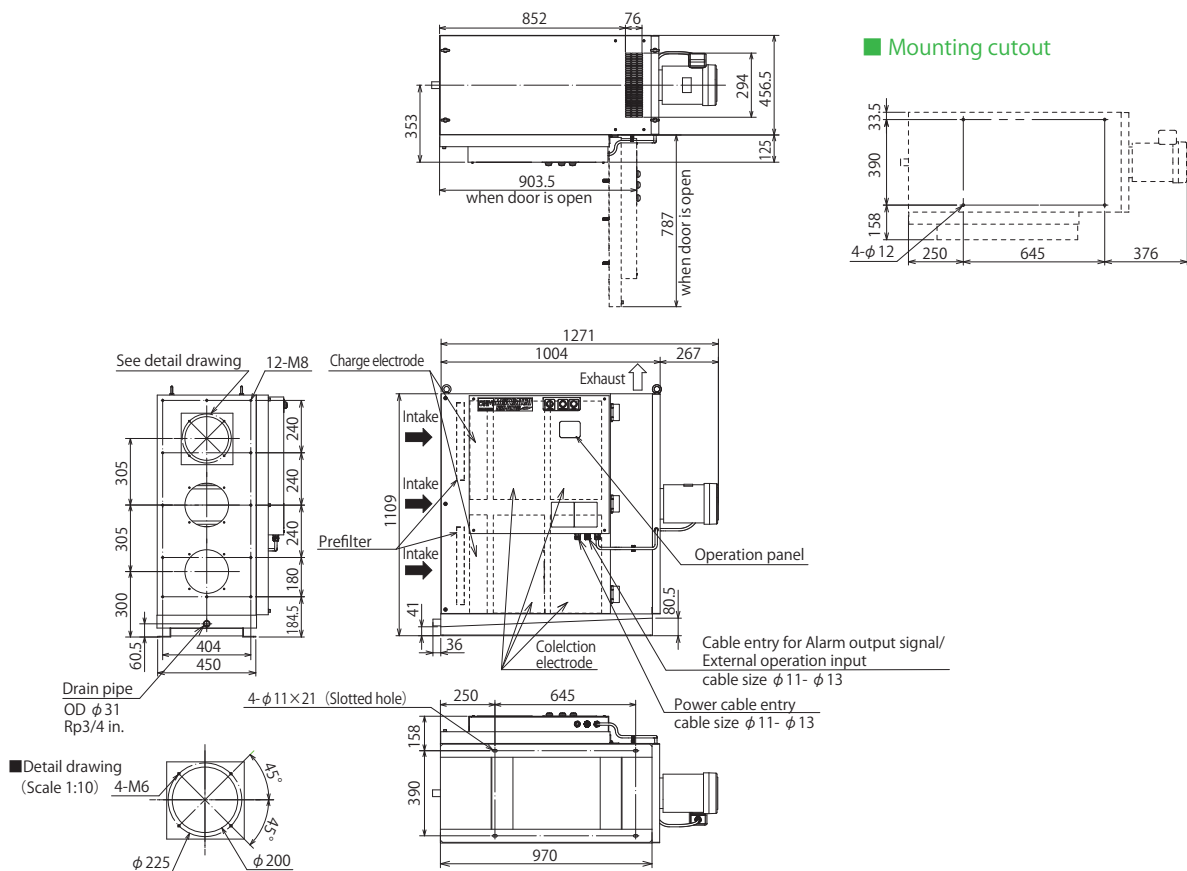
4

Particles escaped from the 1st Collection electrode will be collected in the 2nd electrode and purified air will be discharged from the fan.

5

Collected oil particles are liquified and then discharged from the drain port.

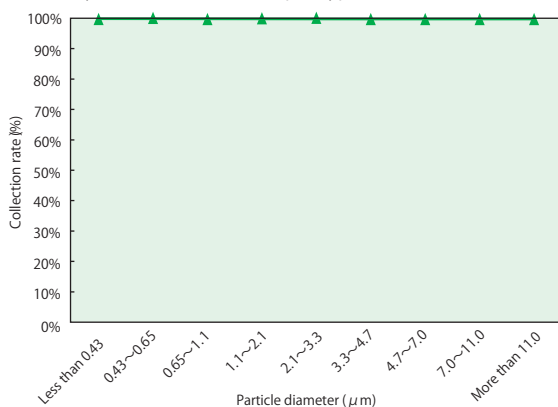
Outline drawing



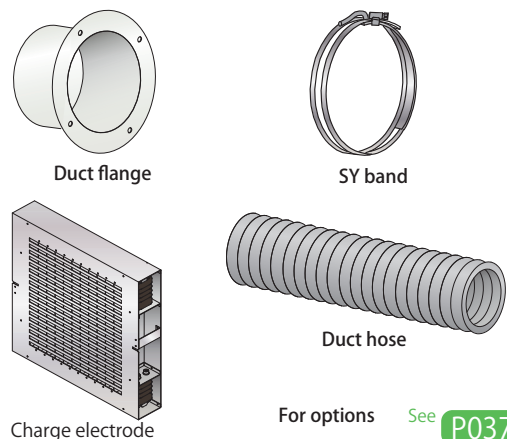
Mounting cutout

Collection rate

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



Option



For options See P037

MIST
CATCH

Non-filter
oil mist
collector

Electrostatic
oil mist
collector

Filter
oil mist
collector

Option

Auto-cleaning
unit

Electrostatic Oil mist collector

OMC-E21

Up to 150mg/m³ mist concentration! Collection rate of more than 99%



Example of use

RoHS

Collection method



Features



Model/Specifications

| | | |
|-------------------------------------|---|--------------------|
| Model | OMC-E21 | |
| Max. airflow [*] | 8/10m ³ /min | |
| Collection efficiency | 99% or more (by gravimetric method) | |
| Type of mist collectable | Oil-based and water-soluble | |
| Rated voltage | 3-phase, 200VAC, 50/60Hz | |
| Motor output rating | 0.2kW (2P) | |
| Current consumption | 1.7/2.0A or less | |
| Working temperature | 0 to +40°C | |
| Working humidity | 10 to 80%RH, free from condensation | |
| Noise | 75dB(A) | |
| Max. mist concentration | 150mg/m ³ | |
| Max. suction air temp. | +40°C | |
| Ozone concentration | Less than 0.04ppm | |
| Display | Power (White), Operation (Orange), Electrode check (Red) | |
| External output | Alarm output 1c 250VAC 2A, 30VDC 2A | |
| Safety circuit | High voltage cutoff in the event of frequent spark discharges, high voltage short circuit and door open | |
| Drain port | φ 18 pipe | |
| High voltage output (switchable) | HV | DC-9kV, -8kV, -7kV |
| | LV | DC-6kV, -5kV, -4kV |
| Paint color | Powder coating, Ivory (10GY9/1 equivalent) and Light green (10GY8/4 equivalent) | |
| Weight | 44.0kg | |
| Standard accessory | 2m drain hose, 1 drain hose band, 1 instruction manual | |

Note) This product does not come with a duct flange for φ 125 duct hose. Choose Please select an appropriate duct flange from the option list of Page 41.

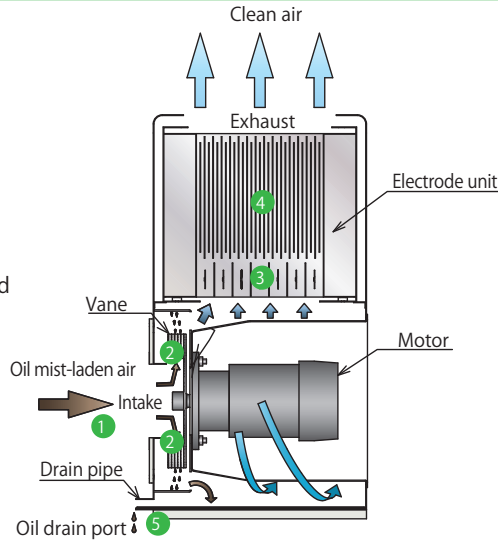
⚠ Caution

- 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 40 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.
- Do not connect an inverter to power supply. It can be a cause of product failure.
- Maintenance cycle may differ depending on the amount or components of oil mist.
- 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.

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. Particles larger than $2\mu\text{m}$ are eliminated in this process (Primary treatment).

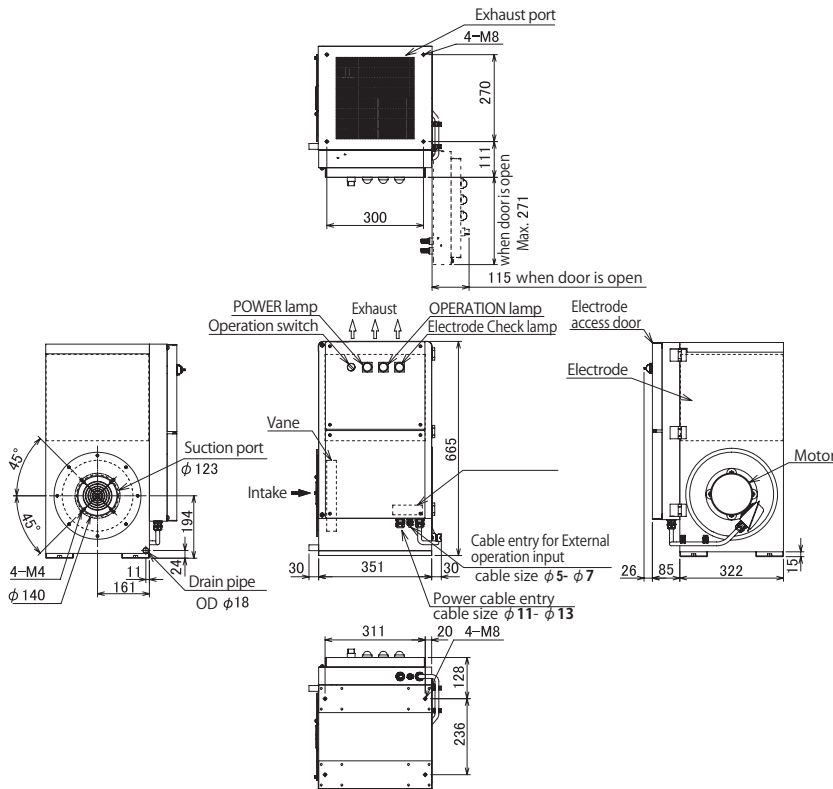


3 Small particles escaped from the 1st process will go into the electrode unit.

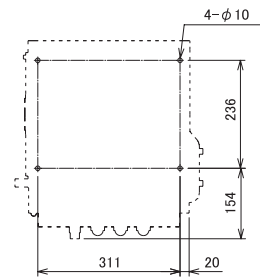
4 The electrode consists of charge part and collection part. At the charge part, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist. At the collection part, high voltage is applied to the parallel arranged plate electrodes so they absorb the particles which have been ionized by electrostatic force.

5 Collected oil particles are liquified and then discharged from the drain port.

Outline drawing

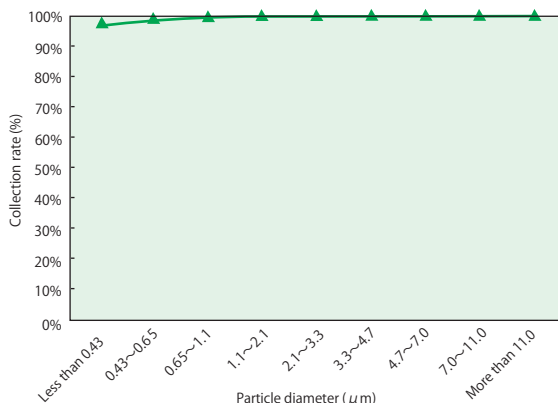


Mounting cutout

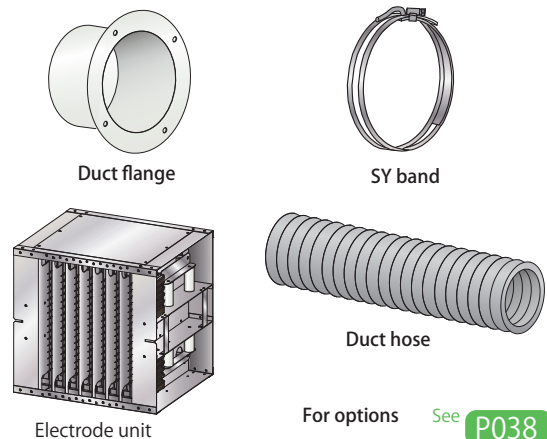


Collection rate

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



Option



For options See P038