Electrostatic Oil mist collector

OMC-E21

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

Example of use

RoHS

Collection method
ELECTROSTATIC

Features
eco Energy Saving
High efficiency

Model/Specifications

Model		OMC-E21
Max. airflow		8／10m³/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℃
Working humidity		10 to 80%RH, free from condensation
Noise		75dB(A)
Max. mist concentration		150mg/m³
Max. suction air temp.		+40℃
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		φ18 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 φ125 duct hose. Choose Please select an appropriate duct flange from the option list of Page 41.

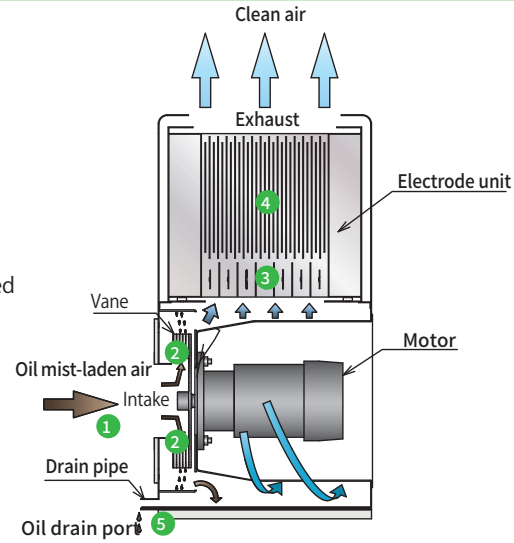
⚠ Caution

- ●Be sure to read the instuction 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 againg 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 shoulbe be done by professionals or qualified personnel.
- ●Make sure that the packaging is not damaged on delivery. Damages during transportaion 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 μm are eliminated in this process (Primary treatment).

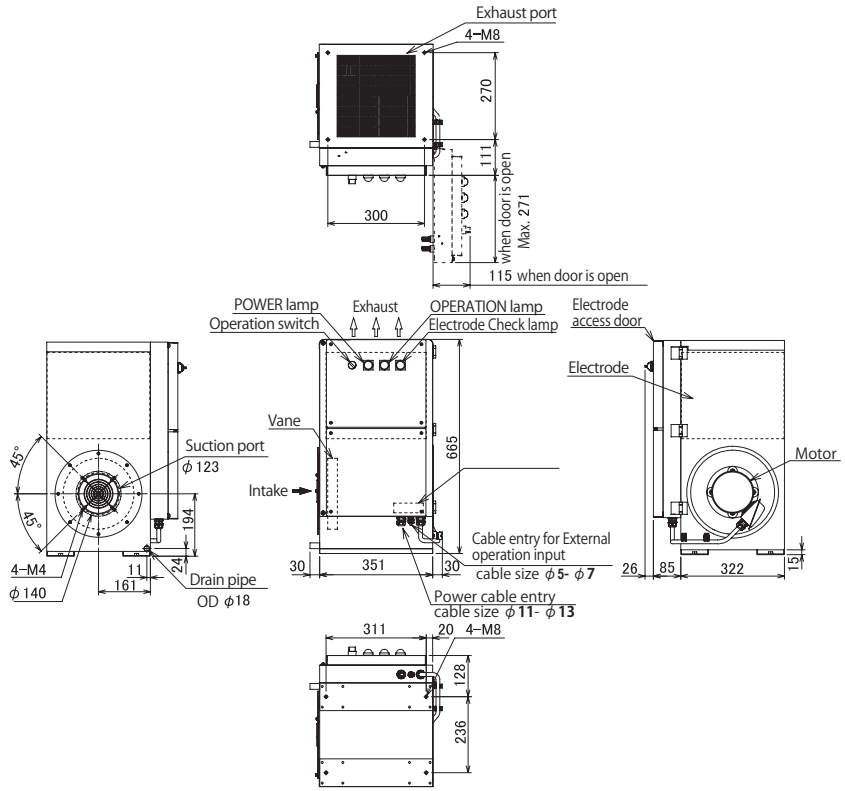


3
Small particles escaped from the 1st process will go into the electrode unit.

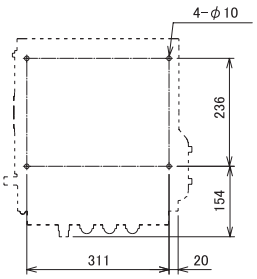
4
The electrode consists of charge part and collection part. At the charge part, corona discharge takes place between the high-voltage needle electrodes and the grounded plate electrodes and this causes ionization of oil mist. At the collection part, high voltage is applied to the parallel arranged plate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

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

Outline drawing

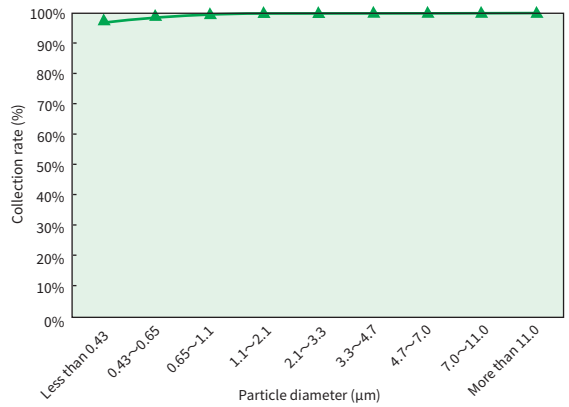


Mounting cutout

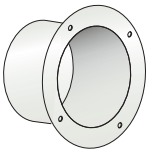


Collection rate

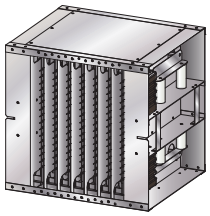
Test oil : Water-insoluble cutting oil
Measured by : Low Volume Air Sampler type AN-200

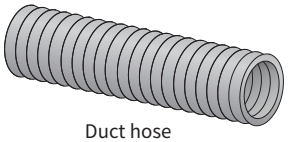


Option


Duct flange


SY band


Electrode unit


Duct hose

For options See P038