Air Pollution Prevention Facility

OIL MIST COLLECTOR

OMC






What is OMC?

There are many processes where oil fume or oil mist such as industrial use machine tool MCT, CNC board, grinder, drilling machines, high speed apparatus, cutting apparatus and rolling. In the workshop where such grinding and cutting occurs, cutting oils used for cooling and lubricating of structures are easily misted during work and induce respiratory disease in workers.

Oil mist that generally occurs in the machine is 1um or more and in some high temperature processes such as welding, heat processing or grinding, the volatile substance evaporates and condenses. As it occurs in ultrafine particles of 1um or less, it may be more dangerous.

Recently, although the worker is separated from the machine by using ventilators, an efficient method to process small oil mist in the workshop is needed. As methods to remove such diverse oil mists, although various methods such as cyclone dust collector, filter dust collector and electric dust collector is being developed, there are still limits in processing oil mist of 1um or less.

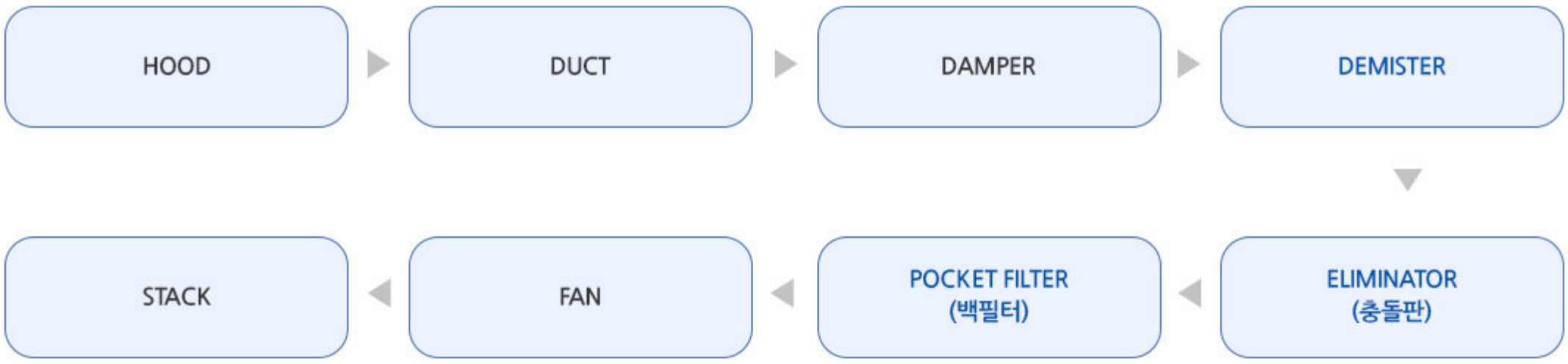
As a pile up processing dust collector of oil mist and fumeoccurring in such process, OMC filters pollutants (dust and oil) occurring within the workplace and increases work environment.

Characteristics

- Low resistance, high dust collection efficiency
- Is especially appropriate for places with a lot of dust
- Can be cleaned easily
- Appropriate for use as central and concentrated dust collector as can be connected to many processing equipment
- The piled up oil mist is gathered to the lower parts due to gravity and can be emitted via valves. (reuse possible)
- As there is flow gauge, can check how much oil there is
- Can be used without classification of solubility and insolubility
- Easy to handles as light

OMC Processing Method

Processing Method 1



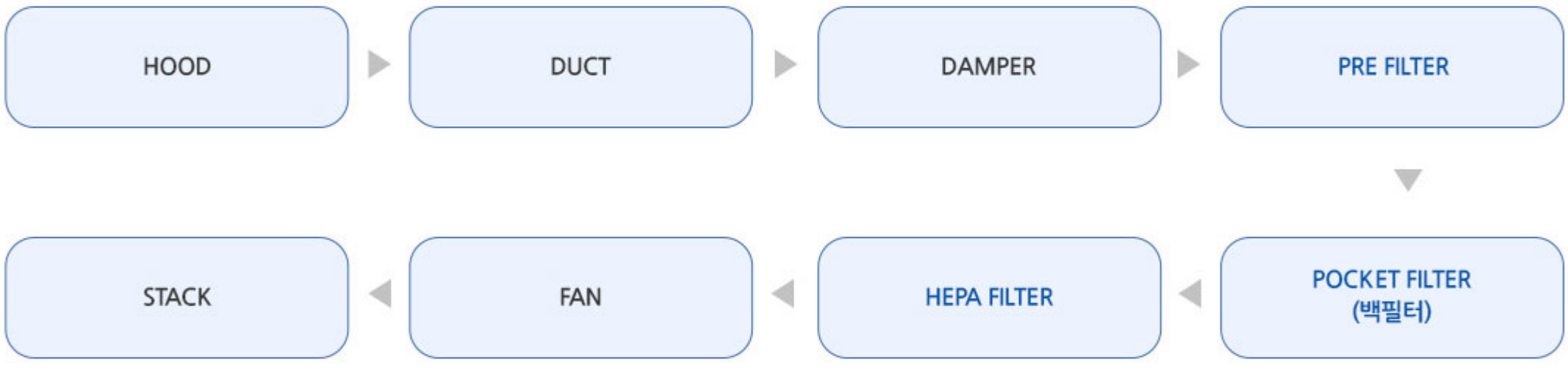
Effective for Removal of Oil Mist with a lot of Moisture

- Stage 1
  Moisture is removed through demister

- Stage 2
  Remove particle that could not be removed from demister using eliminator

- Stage 3
  Pocket filter made by synthetic textile is blocked by pollutant sources with moisture and oil and particle that could not be removed in the prior stage is removed.

Processing Method 2



3 Stage Filter Stage Increases Oil Mist Removal Efficiency and Extends Life Expectancy of Filter

- Stage 1
  Using a free filter made of polyester textile, big sized particles (3~30um) must be removed first

- Stage 2
  Pocket filter made by synthetic textile is blocked by pollutant sources with moisture and oil and particle (0.1um) that could not be removed in the prior stage is removed.

- Stage 3
  Using HEPA filter made of glass fiber, the particles that could not be removed in the pocket filter is ultimately removed (Remove 99.7% the 0.3um particles)