An eco-friendly vurrent-type environmental improvement

KESMAK / Multistage nozzle type KESMAK 2D / 4D

Liquefaction collection device of lamp spot

# MIST GRIPS

Eco-friendly water flow typeenvironment improving device



Asahi Kako Co.,Ltd. www.asahikk.co.jp

# KESMAK / Multistage nozzle type KESMAK 2D / 4D

# KESMAK is an optimal solution for the environment.

For control of oil smoke, odors, and dust, scrubbers, electrical dust collectors, filter types, and combustion types have been mainly used. However, these devices may require frequent maintenance and high running costs and have a risk of duct fires. On the contrary, a water flow-type environment improving device, "KESMAK," which has the same basic principles of a scrubber, allows various treatments that have been impossible with previous scrubbers to be performed with a completely new method by significantly improving the gas-liquid contact rate compared with previous devices. In addition, with its high-pressure circulating pump ejector system, a blower is no longer required and maintainability is significantly improved.



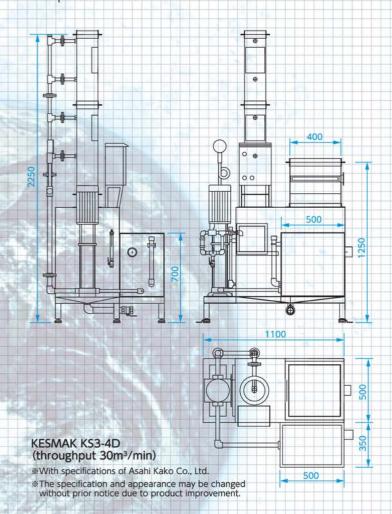
<sup>\*</sup> KESMAK, with the specifications of Asahi Kako Co., Ltd., is uniquely customized. All the products are manufactured by order. Therefore, the air flow and the device size are changed according to discussions in each case. For details, please contact Asahi Kako Co., Ltd.

Main features KESMAK

- Excellent heat resistance, water resistance, and dust resistance with mainly stainless materials used
- In principle, the previous suction apparatus is not necessary, reducing the initial cost.
- With the reduced size of the device, less air flow is required, because spot/dispersed repair can be performed near the sources of problems.
- Since KESMAK has no filter, clogging does not occur even if various kinds of dust are absorbed, which makes cleaning easy and improves hygienic conditions. The running cost for filter replacement can be also eliminated.
- With its compact design, KESMAK can be set for each line.

#### KESMAK reference drawing [KESMAK KS3-4D]

As shown in the drawing, the design is very compact compared with previous scrubbers.

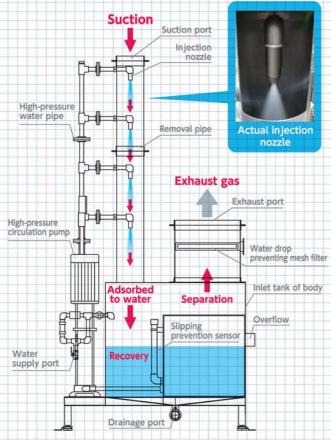


### Oil smoke treatment with KESMAK [Dirt recovered in water]



The condition in the tank in which substances from the exhaust gas are emulsified into water and especially dirty exhaust gas is separated and recovered.

#### KESMAK basic structure



\*The drawing shows the KESMAK 4D (a 4-stage nozzle type)

### Oil smoke treatment with MIST GRIP [Smoky Conditions]

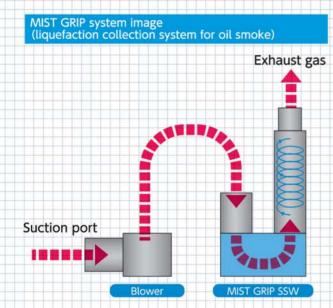


As shown in the images, white and violet smokes are removed to an indistinctive level. Alternatively, remaining smoke is reduced by discharging with water vapor.

# MIST GRIPS

# The basic principles of KESMAK have been developed to be MIST GRIP

MIST GRIP is a device to collect substances that cause oil smoke by passing the exhaust gas sucked in by a blower, etc. into the removal pipe in which a misty high-pressure jet stream circulates in a spiral. Unlike KESMAK, it requires a fan to push exhaust gas into the device. However, recovery efficiency has been significantly increased with a longer time to contact the water stream in the removal pipe.





MIST GRIP MG-SSW200 (200m3/min)

The product in the image has been introduced to our Hanwa Factory as a measure against oil smoke (visits are accepted)

\*\*As in the case of KESMAK, MIST GRIP is customized according to requests of customers. For details, please contact Asahi Kako Co., Ltd.

## List of applications of KESMAK and MIST GRIP and objects to be treated

Industry	Business conditions of application examples [objects to be treated]
Food processing	Boxed lunches for convenience stores and supermarkets [Steam/odor/humidity/cooling]  Rice cracker frying/ice cream production in dairy industry [Oil smoke/odor/dust]  Processing of various sauces [Garlic smell] Deep-fried tofu processing [Oil smoke treatment/oxidized flavor Frozen food [Soy sauce/oil spraying] Sauce/spice processing [Various spice smells etc.]  Cut vegetables [Chlorine odor treatment/onion smell] Cheese production [Removal of salt content]
Fish meal processing Compost	Fish meal production [Ammonia/amine/mercaptan] Garbage treatment [Ammonia/amine/mercaptan]  Oil and fat processing [Ammonia/amine/mercaptan] Meat processing [Meat smell]  Compost [Ammonia/amine] Plastic bottle recycling factory [Oil smoke (flaking process)]
Chemical treatment Related to dry heating treatment	■ Dyeing [Oil smoke treatment] ■ Film processing/coating [Oil smoke treatment (DMF/chlorine gas/formaldehyde)] ■ Vinyl chloride treatment [DOP plasticizer oil smoke] ■ Resin treatment (melamine) [Formaldehyde/phenol] ■ Sponge production [Formaldehyde] ■ Battery charging process [Sulfuric acid mist]
Related to rubber processing Vulcanizing processing	Packing processing/Tire processing [Hydrogen sulfide/methyl disulfide/oil smoke/indoor exhaust]
Hardening processing	■ Electric furnace hardening and tempering/casting mold processing/induction hardening [Oil smoke/odor/hydrogen sulfide treatment]
Machining Related to semiconductors	Surface treatment/plating [Hydrochloric acid/sulfuric acid/nitric acid treatment]
Various factories	[Hot air treatment]

## Please leave problems that could not be solved with previous scrubbers to us.

KESMAK, which was originally developed for food factories, is now used by customers in a wide variety of industries. The greatest characteristic of KESMAK is that it can solve various problems such as oil smoke, odors, dust, and hot air all by itself. In addition, the body is made from stainless steel and manufactured in Japan, ensuring a long period of use with safety and security. It also assures high hygienic conditions.

Please consider KESMAK as a method to clean up various types of polluted environments encountered nowadays.

### Why KESMAK is selected ·····

Each of the products is customized based on discussions with users. Unlike other environment improving devices, it is compact and can be set to each line while ensuring high performance. Its operability is also high with a simple design that allows ease of use. Consequently, the initial cost is high compared with other devices, however, KESMAK surely satisfies users as an environment improving device.

Basically, the traditional suction device (blower) is not required. Since stainless steel is mainly used, KESMAK has high heat resistance, water resistance, and dust resistance, as well as high maintainability.

KESMAK is an environment improving device that mainly uses only water and electricity. Those devices using filters or loading materials, which are often found among other environment improving devices, require high running costs for replacement of these items. Combustion-type devices are far from achieving the recent concept of CO2 reduction and have a risk of duct fire. In other words, the running cost of our environment improving device is extremely inexpensive and excellent compared with other devices, and safety is also ensured.

## **Examples of KESMAK delivery results**



**KESMAK KS-4** 

Chinese medicine manufacturer For gas emission

60m³/min

Water flow sterilization and oxidation system



**KESMAK KS6-4D** 

Textile processing industry

120m<sup>3</sup>/min



KESMAK KS-3

Composting facility

or processing acid odors 30m³/min

Chemical injection system



KESMAK KS-3 (specification of SUS316)

Composting facility

or processing alkali odo

30m³/min Chemical injection system



KESMAK KS-6/KS-7

Metalworking industry

For hot air/oil smoke

120m3/min-150m3/min



KESMAK KS600-4D

Textile processing industry

For odors

600m<sup>3</sup>/min



KESMAK KS40-4D × 3 units

Textile processing industry For odor and gas emissions

40m3/min + Chemical injection system

\*\* 1.The above are just some examples of our deliveries, not all of them.
2.We do not accept requests for visits to the factories of the companies in the images above.
3.We do not publicize the names of the companies in the images above.

## We have distinguished results and proofs.

For KESMAK/MIST GRIP, tests with a demo unit can be conducted.

With devices against oil smoke, odors, and dust, actual units are often installed based on the data and many troubles are discovered later.

The policy of our environment improving devices is to achieve results that satisfy the users, of course. We actually visit offices and factories all over Japan and conduct tests with a demo unit after discussion with users. Different customers have different problems.

Even the same substances do not cause the exact same results if the conditions are different. You can check the result first in tests with a demo unit.

Inquiry about this equipment .

## Asahi Kako Co.,Ltd.

Ordinary construction business license No. 133142 received from the Prefectural Governor of Osaka

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Japanese Association on Odor Environment (regular member of profit-making corporation)

The manufacturer of this equipment is Rikken Ltd. As a specified distributor, Asahi Kako Co., Ltd. introduces KESMAK and MIST GRIP to those considering engineering for environments. Especially, we have the best delivery results of large-sized equipment among a number of distributors (KESMAK 4D and MIST GRIP are handled only by our company). We have introduced KESMAK and MIST GRIP in our factory and are the only distributor who participates in exhibitions in Japan and overseas. We also have KESMAK and MIST GRIP test machines, and sales representatives dedicated to KESMAK (not found in other distributors) handle procedures consistently from consultation and tests to equipment introduction and instructions on how to operate the equipment as professionals of environment improving devices (including odor consultants).

This product is for use only in Japan.

[Manufacturer]

Creating harmony between industrial environments and living environments



"KESMAK" is a registered trademark of Rikken Ltd.