Features

K-MATROLL ® VOC deodorizer (KR), concentrator (KU)

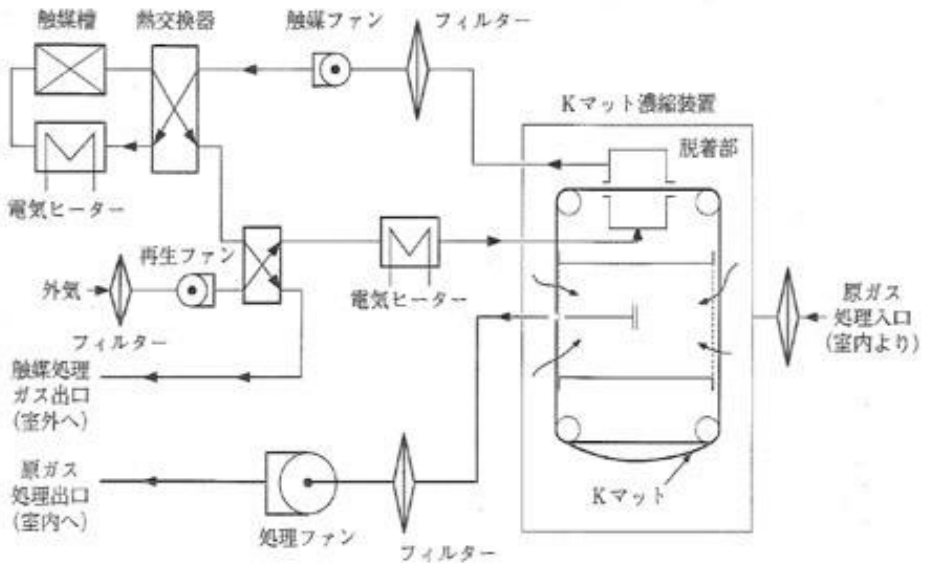
This apparatus adsorbs and concentrates VOCs in exhaust gas with relatively small air volume and economically oxidizes (deodorizes) them. It contributes to environmental improvement by deodorizing of local exhaust gases from small-scale printing, coating, painting, parts cleaning, and exhaust gas from laboratories, etc.

K-MATROLL ® What is a VOC deodorizer?

- This apparatus uses our original K-MAT adsorbent (an adsorbent made of activated carbon fiber "K-FILTER ®" processed into a mat).
- With a thickness of 10 mm, it adsorbs quickly and achieves a VOC removal capacity of over 90%.
- Concentration + combustion package model. It is easy to install and contributes to the improvemnt of the working environment on site.

K-MATROLL ® What is a VOC concentrator?

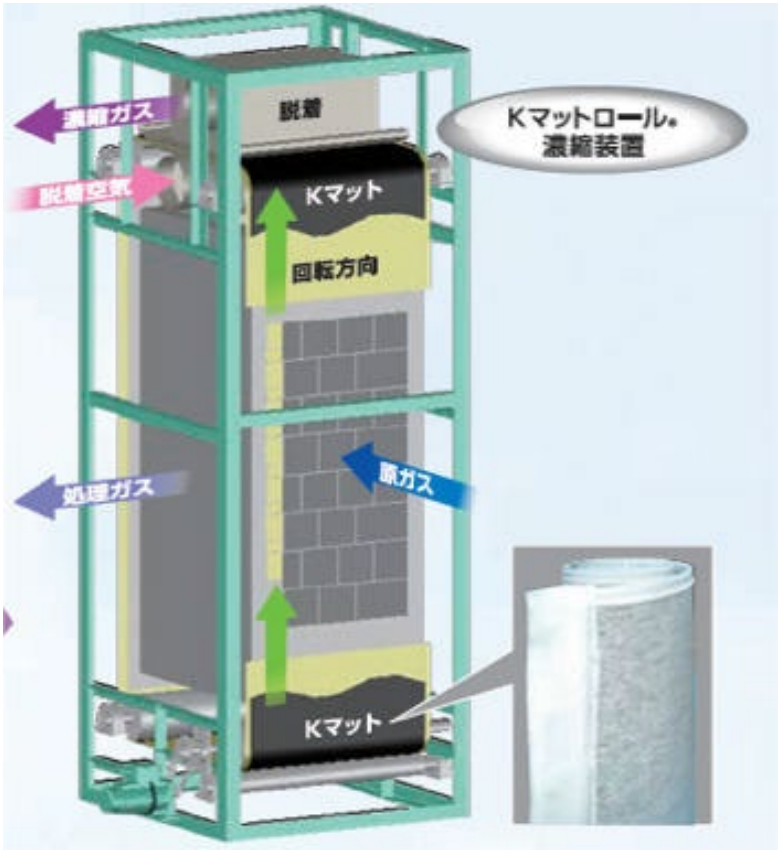
- A model of a VOC deodorizer with only the concentrator.
- We can propose larger systems of 150m3/min or more and combination systems with various post-processing equipment.



Features

K-MATROLL ® VOC deodorizer (KR), concentrator (KU)

The apparatus automatically changes the amount of regenerated airflow to ensure energy saving operaiton at all times combining a concentrator using K-FILTER ® which is the world's first commercially available activated carbon fiber in roll form and an electric-catalytic oxidizer.



1 Energy-saving operation
By concentrating, deodorization can be achieved in a smaller size and with less energy (cost) than direct combustion. In addition, automatic control for changing the amount of air recycled according to the VOC load can contribute to energy saving.

2 Compact
The KR apparatus is compact because of the package model of the concentration part and the oxidation decomposition part.
In addition, it is all-electric and does not require utility connection other than electricity.

3 High performance
The VOC removal rate remains above 90%.

4 Easy handling, and safe
Only pressing the start and stop buttons. The K-MAT can be easily replaced by the customer.
Since the mat is thin, it dissipates heat easily and does not accumulate heat, so it is safe.

processing performance example

Substance name	Source gas concentration	Treatment gas concentration	Concentration factor	Removal rate
	ppm	ppm	Double	%
Xylene and others	80	6	15	93
Toluene and others	100	7	15	93
ethyl acetate and others	50	3.5	15	93
IPA and others	120	10	15	92
PGME et al.	50	3	15	94

*The concentration is the methane CH4 value

K-MATROLL ® VOC deodorizer (KR apparatus)
K-MATROLL ® VOC concentrator (KU apparatus)

Type		KR-15	KR-25	KR-50	KR-75
Treatment Airflow (MAX.m3/min)		15	25	50	75
regenerative air volume (MAX.m3/min)		1.0	1.7	3.3	6.0
electrical capacity (kW)	processing fan	0.4	0.75	1.5	2.2
	playback fan	0.1	0.1	0.2	0.4
	catalytic fan	0.2	0.2	0.2	0.4
	K mat regeneration heater	1.0	1.7	3.3	5.0
	Heater for catalytic oxidation	2.3	4.0	7.6	12.0
	Total	4.0	6.75	12.8	20.0
External dimensions (m): Width x Depth x Height		1.2×0.75×1.8	1.5×0.75×2.0	1.8×0.85×2.3	2.25×1.1×2.55
Approximate weight (kg)		600	750	1100	1400

Note 1) The processing fan contains a pressure loss of about 100 Pa.
Note 2) The life of the K-MAT and catalyst of this apparatus is not guaranteed.
Note 3) If halogen compounds, organosilicon, phosphorus and sulfur compounds, organometallic compounds, etc. are mixed in the current gas (solvent-containing air), the catalyst may be poisoned and the performance may deteriorate.