

1. EPIX Filter Standard Specifications

Item		305series			500series			610series		
		70	150	290	70	150	290	70	150	290
Depth	(mm)	70	150	290	70	150	290	70	150	290
Mass	* (kg)	3	3	6	3	7	13	5	9	17
	H	305	305	305	500	500	500	610	610	610
Dimension (mm)	W	305	305	305	500	500	500	610	610	610
	D	70	150	290	70	150	290	70	150	290
Filter material		Polyolephin Felt								
Frame material		Aluminium								
Separator		Aluminium								
Number of plies		1~3 Plies								
Useful years		One year (depend on inlet concentration)								
Maximum service temp		50°C								

* The mass above shows at 2 plies of media.

Note: Contact Ebara for specifications other than those shown above.

2. Fan Filter Unit (FFU) Standard Specifications

Model		FFU05	FFU10	FFU15	FFU20	FFU30	FFU40	FFU60
Capacity*	(m ³ /min)	5	10	15	20	30	40	60
Fan Performance	(m ³ /min×Pa)	5×900	10×1000	15×1400	20×1400	30×1200	40×900	60×1100
Capacity Control Method		Inverter						
Dimension (mm)	W	450	700		750		1500	
	D	700	700		900		900	
	H	1700	1750		2250		2000	
Product Mass	(kg)	110	180	200	340		600	620

* Applies when static pressure at connection is 200Pa.

Note: Contact Ebara for specifications other than those shown above.

1mmAq=9.8Pa

EPIX Filter



EBARA Environmental Protection Ion Exchange Filter



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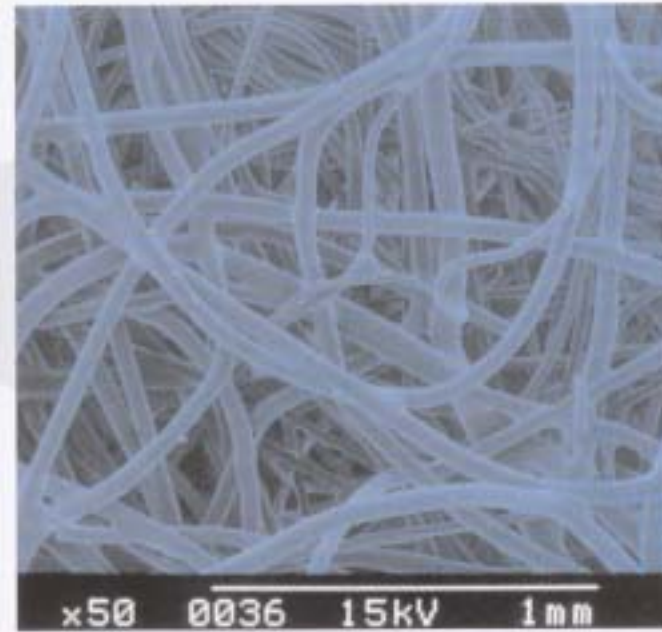
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EPIX Filter



SEM (scanning electron microscope) photo of nonwoven fabric



Fan Filter Unit with EPIX Filter (FFU30)

A New Product from Ebara Corp. Ion Exchange Chemical Filter with Advanced Functions

The EPIX FILTER!

The new requirement for "more chemically clean environment" has been driven by the demand for semiconductor industries, foodstuffs and pharmaceutical plants.

EBARA's novel EPIX filters for removal of trace level chemical contaminants have been developed to reliably meet such requirement. The novel chemical filters are gifted with the capabilities to remove acidic, basic and neutral salts contaminants in the air by means of chemical adsorption through ion exchange functions.

The EPIX filter exhibits its high performance at extremely low concentration range like ppb and ppt level of chemical contaminants in the air.

Features

- 1. Easy installation in existing clean rooms with minimum retrofit**
The filters are light-weight and low pressure drop, because the filter media are made of nonwoven fabric.
- 2. High removal efficiency for even extremely low concentration of chemical contaminants;**
High density of ion exchange functional groups and large surface areas, enable quick reaction and high removal efficiency.
- 3. No discharge of contaminants from itself to effluent air;**
Raw materials free of additives and catalysts keep the final products clean.
- 4. No discharge of adsorbed impurities for fluctuation of atmospheric temperature;**
(Maximum operating temperature is 50 deg.C)
- 5. Flexible selection of combinations of cationic and / or anionic nonwoven fabrics;**

Performance Example

Measurement conditions (air velocity: 0.5 m/s; temperature: 25 deg. C; humidity: 40%)

Trace Gas	NH ₄ ⁺	B	C ²⁻	NO ₃ ⁻	SO ₂
Inlet Concentration (ng/m ³ -Air)	2100	5.6	750	2600	680
Outlet Concentration (ng/m ³ -Air)	< 50	0.5	< 50	590	82

EPIX Filter Installation Plan;

- ① Local Air Supply to Specified Device such as Coater & Developer (Track) and Stepper;**
Prevents surfaces contamination of wafers and devices, and increases production yield.
- ② Clean Room Recirculation System;**
Removes ammonia, acidic, basic and neutral salts which are produced in cleanroom itself, and eventually create a working environment.
- ③ Air Handling Unit of the Outside Air;**
Removes trace amounts of harmful chemical impurities in the outdoor air, and reduce deterioration of cleanroom environments.

