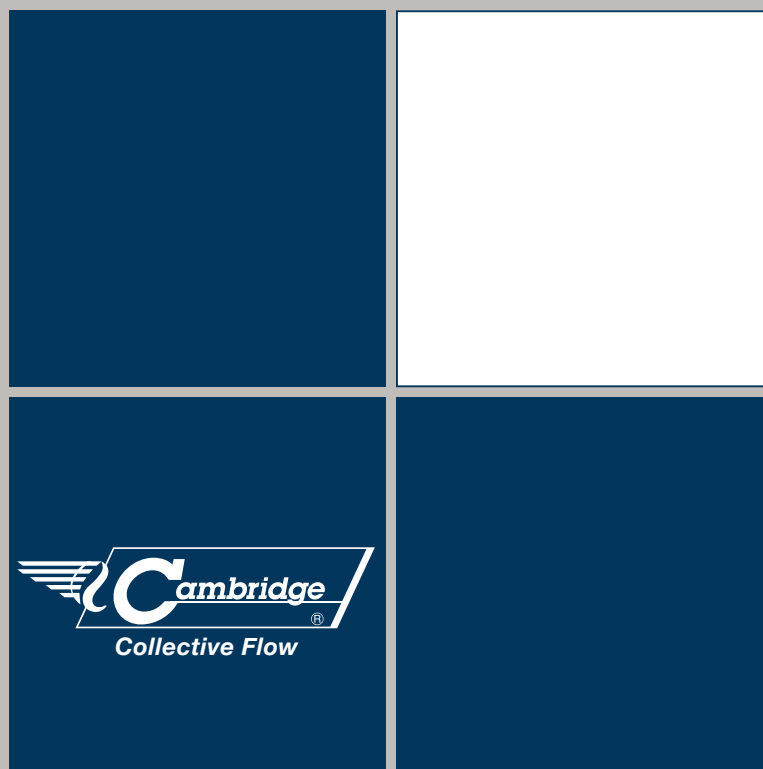




Air Filter Catalog

Kondoh Industries, Ltd.

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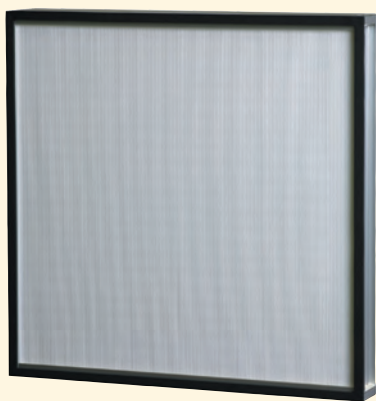
Application-Based Filter Selection Guidelines

Application	Performance Classification	Feature	Product Name	Product Code	Page
Air Handling, Ventilation, Recirculation Units & Ducts	Coarse Particles	Long Service Life	Neo-Cap Filter	45NC	31
		Washable	Hi-Pac Filter	PKA	32
		Auto-Winding	Cam-Roll	CY / CT	34•35
	Medium Efficiency	Low Profile	Aero-Answer Eco Mate	ADM	18•19
			Aero-Answer Eco Long	ADL	
			CP Minipleat	6T / 9T	27
		Long Service Life/Waste Reduction	Aero-Answer Eco Pack	4ADPL	20•21
			Aero-Answer Eco Wing	4ADVP	22•23
		High Temperature	Hi-Temp CP	CP-FU / CP-HT	64•65
		Enzymic Microbial Inhibition	Enzymic Minipleat	N2-9T	70
			Enzymic CP	N2-CP-EA	71
		Non-Outgassing	GIGA CP	GCP-T-EA	50•51
		Salt Arrestance	CP-J	CP-J	26
		Long Service Life	CP/Neo-Flo	CP / CP-T / 43SC	24•25, 28•29
			AP	AP	30
	Chemical/Odor Removal (Intake) Chemical/Odor Removal (Recirc)	Long Service Life	ChemArrest Tray Type	CB-T	40•41
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	HEPA/ULPA	Space Saving/High Volume	Absolute V Bank	1TV	10•11
		Non-Outgassing	GIGA Separator Type	GM / GGX / GG	48•49
Clean Room Air Outlets / Clean Room Equipment	HEPA/ULPA	Non-Outgassing	GIGA Minipleat	GM / GG / GGX / GA5,6,8	48•49
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		Corrosive Environments	PTFE Filter	GB5 / GB6 / GB8	52•53
			High Temperature Separator Type	1FU / HT1F / 1XT	56~61
		High Temperature	High Temperature Separator Type/L Type	1LFU / HT1LF / 1LXT	
			High Temperature Minipleat Type	HT1TF / HT7TF	62•63
			Enzymic Minipleat	N1-1T	68
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		Energy-Saving/Low ΔP	Absolute II LP Type Low Pressure Drop ULPA	2EA-LP	12•13
		Space Saving/High Volume	Absolute L Type/Micretain	1LD / 7LD	14~17
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			Absolute Minipleat HEPA	1T	8•9
	Chemical/Odor Removal	High Efficiency/Long Service Life	ChemArrest (for Process Tools, Ceilings, FFUs)	CBM-F	42•43
			ChemArrest (for Recirculation)	CBS-F	44•45
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	Medium Efficiency	For Radioactive Material	Neo-Flo Reinforced Type	43SC	78
		Incinerable For Radioactive Material	Neo-Flo U Type	U43S	79
	HEPA/Charcoal	Incinerable/Space-Saving for RI Facilities	Absolute AU Type	1AU / 1LTPU	72•73
			Charcoal U Type	FEU—1495	74
		Incinerable For Radioactive Material	Absolute U Type	1U / 1LU	81
		For Radioactive Material	JIS Compliant Absolute Filter	1EU / 1LEU	76•77
			Self-Contained Absolute Filter	1DS	82•83
			Charcoal Filter	FC / FD / FE	80•81
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Absolute Filter II

Minipleat ULPA Filter

ABSOLUTE FILTER II MINIPLEAT



- Low pressure drop, low energy consumption
- Space-saving, light-weight design

Model	2T-□□
Test Standard	0.1-0.2μm
Efficiency	99.999%+

Scan Tested

Model Designators

2 T - □ □

Depth Designator
 E: 35mm
 No Mark: 50mm
 LP: 65mm
 A: 80mm
 M: 100mm

Size Designator

Minipleat Designator

Absolute Filter II Designator

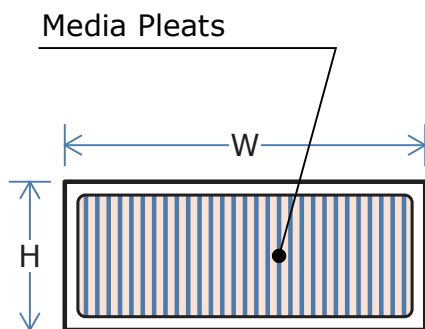
Component Materials / Usage Conditions

Models		All
Component Materials	Media	Glass Fiber
	Separator	Hot Melt Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
2T-110E	1.1	127	294	305	305	35	0.8
2T-320E	2.3			610	305		1.2
2T-600E	5			610	610		2
2T-320	3.3	147		610	305	50	1.7
2T-600	7			610	610		2.8
2T-1200	14.4			610	1219		5
2T-320LP	4.7			610	305	65	2
2T-600LP	10			610	610		3.4
2T-1200LP	20.6			610	1219		6.2
2T-320A	4.7	132		610	305	80	2.3
2T-600A	10			610	610		3.9
2T-1200A	20.6			610	1219		7
2T-320M	4.9	108		610	305	100	3.4
2T-600M	10.3			610	610		5.5
2T-1200M	21.1			610	1219		9.8

Available Sizes (mm)



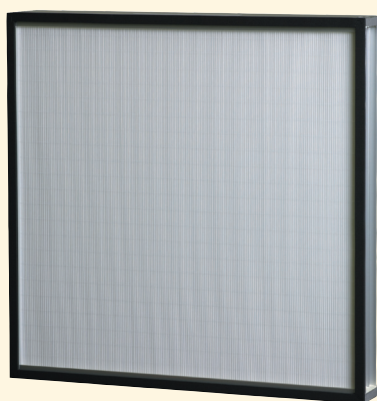
Depth	Max Height	Max Width
35	610	610
50	610	1219
65	762	1219
80	915	1524
100	915	1524

For horizontal airflows, install filters with pleats perpendicular to the ground. Please contact us regarding availability of custom sizes.

Absolute Filter

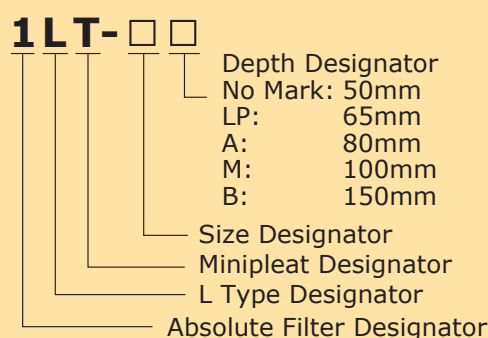
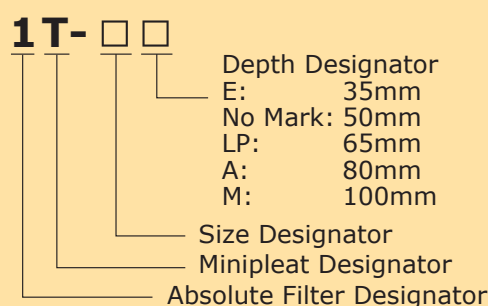
Minipleat HEPA Filter

ABSOLUTE FILTER MINIPLEAT



- Space-saving, light-weight design
- Easily installable compact size

Model Designators



Scan-Tested Models

1T-600S	1LT-600SLP
1T-600SLP	1LT-600AS
1T-600AS	1LT-600MS
1T-600MS	1LT-600BS

Model	1T-□□		1LT-□□	
	Standard Type		High Airflow Type	
Test Standard	0.3μm			
Efficiency	99.97%+	99.99%+	99.97%+	99.99%+
	—	Scan-Tested	—	Scan-Tested

Component Materials / Usage Conditions

Models		All
Component Materials	Media	Glass Fiber
	Separator	Hot Melt Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

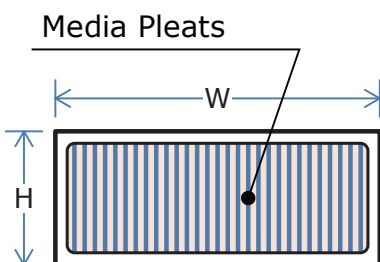
Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1T-110	2.2	147	294	305	305	50	1.1
1T-320	4.7			610	305		1.7
1T-600	10			610	610		2.8
1T-110LP	2.2	98		305	305	65	1.3
1T-320LP	4.7			610	305		2.0
1T-600LP	10			610	610		3.4
1T-1200LP	20.6			610	1219		6.1
1T-320A	4.7	88		610	305	80	2.2
1T-600A	10			610	610		3.8
1T-1200A	20.6			610	1219		6.9
1T-320M	4.9	74		610	305	100	3.3
1T-600M	10.3			610	610		5.4
1T-1200M	21.1			610	1219		9.7

High Airflow Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1LT-110	3.8	249	498	305	305	50	1.1
1LT-320	8			610	305		1.8
1LT-600	16.9			610	610		3
1LT-110LP	5			305	305	65	1.3
1LT-320LP	11.8			610	305		2.0
1LT-600LP	25			610	610		3.3
1LT-1200LP	50			610	1219		6.2
1LT-320A	12.8			610	305	80	2.3
1LT-600A	27			610	610		3.9
1LT-1200A	55.4			610	1219		6.9
1LT-320M	15.1			610	305	100	3.3
1LT-600M	32			610	610		5.4
1LT-1200M	65.6			610	1219		9.7
1LT-320B	14.8	200	400	610	305	150	3.9
1LT-600B	31.2			610	610		6.8
1LT-1200B	64.1			610	1219		12.5

Available Sizes (mm)



Depth	Max Height	Max Width
35	610	610
50	610	1219
65	610	1219
80	762	1524
100	915	1524
150	610	1219

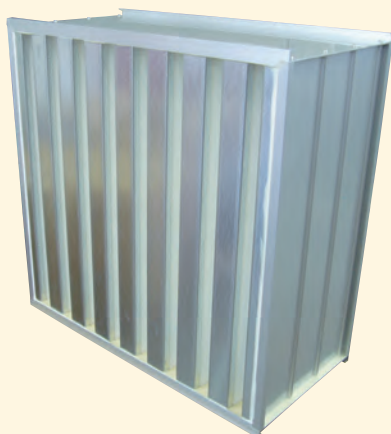
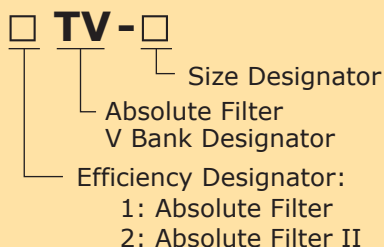
For horizontal airflows, install filters with pleats perpendicular to the ground.

Please contact us regarding availability of custom sizes.

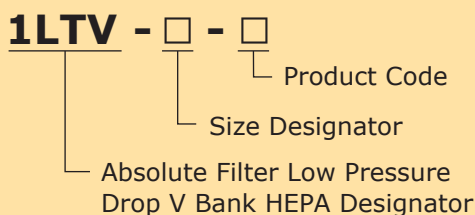


- Airflows equivalent to medium/high efficiency filters
- GIGA Series V Bank Filters also available

Model Designators



Model Designators



Absolute Filter V Bank High Airflow V Type Filter

ABSOLUTE FILTER V BANK

Model	1TV-□□	2TV-□□
Test Standard	0.3μm	0.1-0.2μm
Efficiency	99.97%+	99.999%+

Component Materials / Usage Conditions

Models		□TV-□
Component Materials	Media	Glass Fiber
	Separator	Hot Melt Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Plate	Aluminum
	Gasket	EPDM
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

Absolute Filter V Bank Low Pressure Drop

ABSOLUTE FILTER LOW PRESSURE DROP V-BANK

Model	1LTV-□□
Test Standard	0.3μm
Efficiency	99.97%+

Component Materials / Usage Conditions

Models		1LTV-□
Component Materials	Media	Glass Fiber
	Separator	Hot Melt Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Plate	SGCC
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

HEPA High Airflow Type

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1TV-200	56.6	249	498	610	610	292	15
1TV-212	60			305*	610*		8
1TV-100	28.3						
1TV-106	30						

* Half size vertical or horizontal types available.

ULPA High Airflow Type

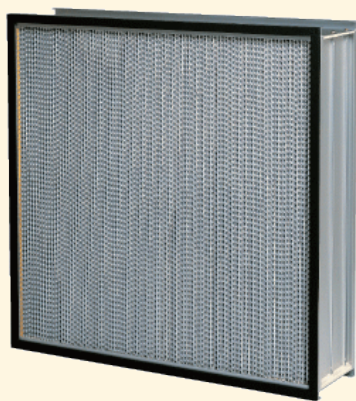
Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
2TV-180	50	275	550	610	610	292	15
2TV-90	25			305*	610*		8

* Half size vertical or horizontal types available.

HEPA Low Pressure Drop Type

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Efficiency (%)	Weight (kg)	
		Initial Max	Final	Height	Width	Depth			
1LTV-200	56	170±15	500	610	610	292	99.97+	18.5	
1LTV-200-JQT	70	227±20					99.96+		
1LTV-100	26	170±15		305*	610*		99.97+	9.5	
1LTV-100-JQT	32	227±20					99.96+		

* Half size vertical or horizontal types available.



•Low pressure drop, low energy consumption

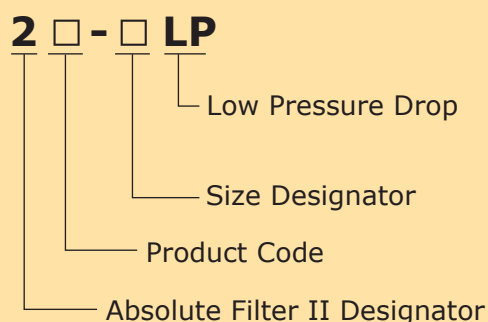
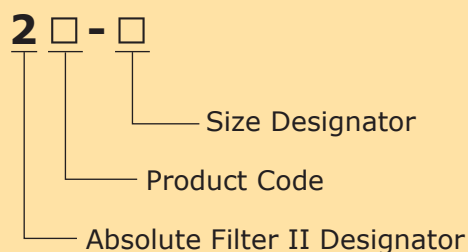
Absolute Filter II

Separator ULPA Filter Standard/LP Type

ABSOLUTE FILTER II

Model	2□-□	2□-□LP
	Standard Type	Low Pressure Drop Type
Test Standard	0.1-0.2μm	
Efficiency	99.999%+	
	Scan-Tested	

Model Designators



Component Materials / Usage Conditions

Product Code		EA
Component Materials	Media	Glass Fiber
	Separator	Aluminum
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Usage Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

Models		BA
Component Materials	Media	Glass Fiber
	Separator	Paper
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Temperature (°C)	60
	Max. Peak Usage Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	85

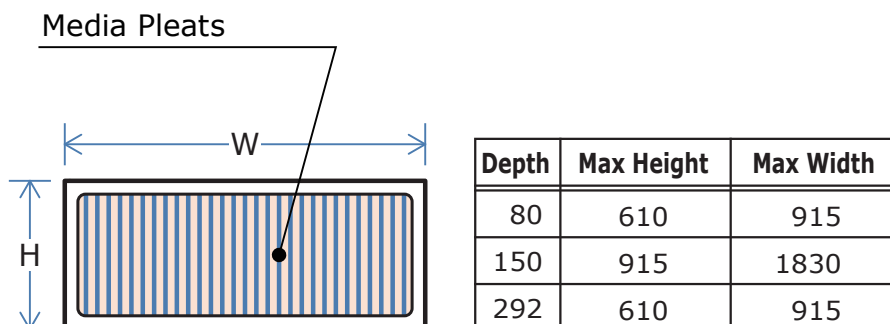
Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
2□-140	4	249	498	610	305	80	2.2
2□-250	9			610	610		3.6
2□-390	11			610	762		4
2□-110	3.5			305	305	150	2.1
2□-320	8			610	305		3.4
2□-600	17			610	610		5.6
2□-830	22			610	762		6.8
2□-200	6			305	305	292	4.5
2□-450	13			610	305		7.1
2□-1000	28			610	610		12
2□-1250	35			610	762		14.4

Low Pressure Drop Type Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
2□-110LP	3.5	157	498	305	305	150	2.3
2□-320LP	8			610	305		3.7
2□-600LP	17			610	610		6.4
2□-1200LP	34			610	1219		11.7

Available Sizes (mm)

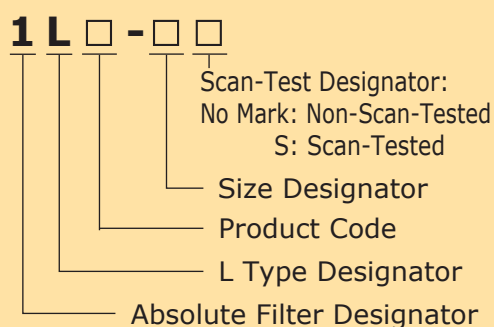
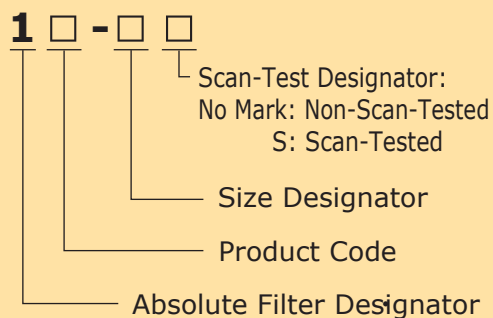


For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Standard Type:
Low pressure drop, low energy consumption
- L Type:
High airflow/space-saving design

Model Designators



Absolute Separator HEPA Filter Standard /L Type (High Airflow)

ABSOLUTE FILTER

Model	1□-□□		1L□-□□	
	Standard Type		High Airflow Type	
Test Standard	0.3μm			
Efficiency	99.97%+	99.99%+	99.97%+	99.99%+
	-	Scan-Tested	-	Scan-Tested

Component Materials / Usage Conditions

Product Code		A	D
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Plywood	
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	85	100

Product Code		BA	EA
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Aluminum	
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	85	100

Product Code		EU
Component Materials	Media	Glass Fiber
	Separator	Aluminum
	Frame	Stainless Steel
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

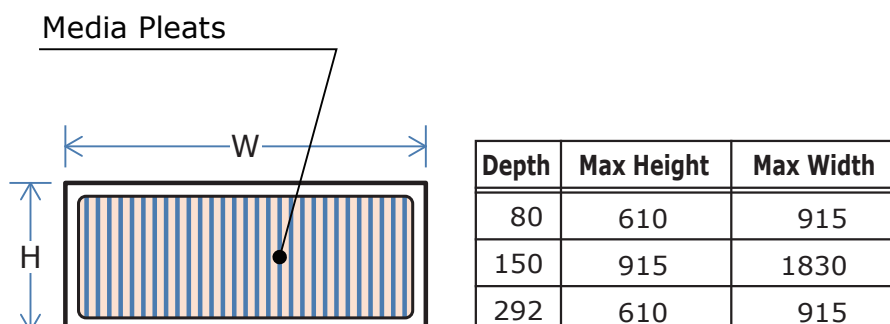
Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1□-140	4	249	498	610	305	80	2
1□-250	9.2			610	610		3.2
1□-390	11			610	762		4
1□-110	3.9			305	305	150	2
1□-320	8.5			610	305		3.2
1□-600	18			610	610		5.2
1□-830	22			610	762		7.8
1□-200	6.4			305	305	292	4.3
1□-450	15			610	305		6.8
1□-1000	32			610	610		11.3
1□-1250	40			610	762		13.5

Low Pressure Drop Type Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1L□-25	7	249	498	610	305	80	2.2
1L□-60	15			610	610		3.6
1L□-70	20			610	762		4.2
1L□-20	6			305	305	150	2.2
1L□-40	12			610	305		3.4
1L□-100	28			610	610		5.7
1L□-130	36			610	762		8
1L□-35	10			305	305	292	4.7
1L□-75	22			610	305		7.5
1L□-180	50			610	610		12.9
1L□-210	60			610	762		15.6

Available Sizes (mm)



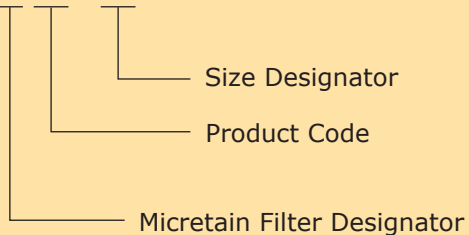
For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- 95% Efficiency
- Pressure Drop is 50% lower than standard HEPA filters

Model Designators

7 □ - □



7 L □ - □



Micretain Filter Separator Sub-HEPA Standard/L Type

MICRETAIN FILTER

General Use	Model	7 □ - □	7L □ - □
		Standard Type	High Airflow Type
	Test Standard	0.3μm	
	Efficiency	95%+	

Component Materials / Usage Conditions

Product Code		A	D
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Plywood	
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	85	100

Product Code		BA	EA
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Aluminum	
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	85	100

Product Code		EU
Component Materials	Media	Glass Fiber
	Separator	Aluminum
	Frame	Stainless Steel
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

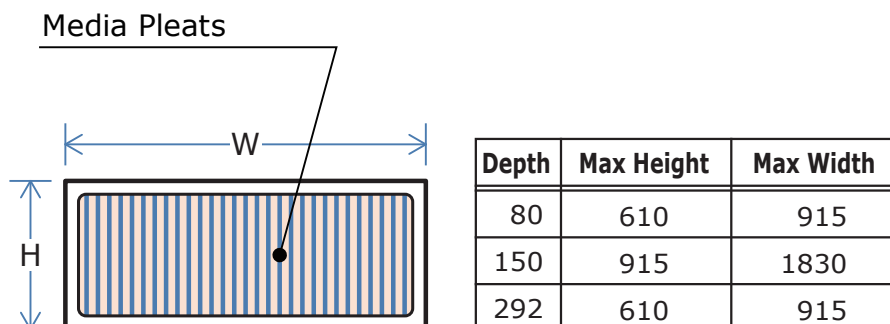
Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7□-140	4	125	245	610	305	80	2.0
7□-250	9.2			610	610		3.2
7□-390	11			610	762		4
7□-110	3.9			305	305	150	2.1
7□-320	8.5			610	305		3.2
7□-600	18			610	610		5.3
7□-830	22			610	762		7.8
7□-200	6.4			305	305	292	4.4
7□-450	15			610	305		6.8
7□-1000	32			610	610		11.4
7□-1250	40			610	762		13.6

Low Pressure Drop Type Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7L□-25	7	125	245	610	305	80	2.2
7L□-60	15			610	610		3.6
7L□-70	20			610	762		4.2
7L□-20	6	137	275	305	305	150	2.2
7L□-40	12			610	305		3.6
7L□-100	28			610	610		6
7L□-130	36			610	762		8
7L□-35	10	177	355	305	305	292	4.7
7L□-75	22			610	305		7.6
7L□-180	50			610	610		13.1
7L□-210	60			610	762		15.8

Available Sizes (mm)

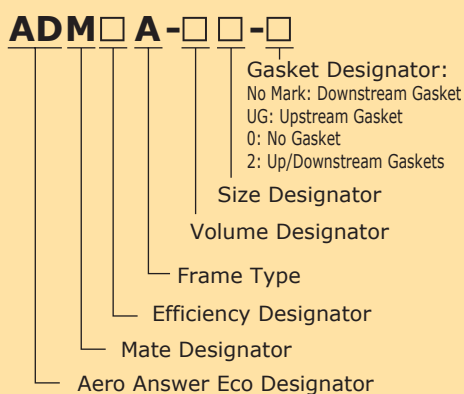


For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Antistatic Media
- Also effective for seasalt
- Space-efficient 70mm depth available

Model Designators



Aero-Answer Eco Mate Medium/High Efficiency Filter

AERO-ANSWER ECO MATE

Model	ADM ☐ A - ☐ ☐ - ☐
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	50%+ at 0.4μm / 60%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

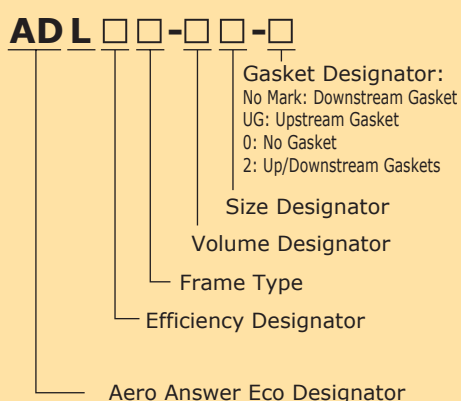
Component Materials / Usage Conditions

Product Code		ADM ☐ A
Component Materials	Media	Non-Woven Fiber
	Separator	Embossing + Hotmelt
	Frame	Aluminum
	Sealant	Urethane Resin
	Gasket	EPDM
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



- Antistatic Media
- Incinerable
- Also effective for seasalt

Model Designators



Aero-Answer Eco Long Medium/High Efficiency Filter

AERO-ANSWER ECO LONG

Model	ADL ☐ ☐ - ☐ ☐ - ☐
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	50%+ at 0.4μm / 60%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

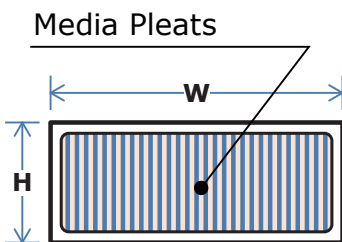
Component Materials / Usage Conditions

Product Code		ADL ☐ W	ADL ☐ A
Component Materials	Media	Non-Woven Fiber	
	Separator	Embossing + Hotmelt	
	Frame	Plywood	Aluminum
	Sealant	Urethane Resin	
	Gasket	EPDM	
Usage Conditions	Max. Continuous Usage Temperature (°C)	43	
	Max. Peak Temperature (°C)	60	
	Max. Peak Humidity (%RH at No Condensation)	100	

Eco Mate Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Salt Arrestance (%) ³	Weight (kg)
		Initial	Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²	
ADM6A-56F	56	50	350	610	610	65	50+	60+	–	2.1
ADM6A-26V	26			610	305					1.3
ADM6A-26H	26			305	610					1.5
ADM9A-56F	56	105	350	610	610	65	80+	90+	90+	2.2
ADM9A-26V	26			610	305					1.3
ADM9A-26H	26			305	610					1.5
ADM95A-56F	56	150	350	610	610	65	85+	95+	95+	2.2
ADM95A-26V	26			610	305					1.3
ADM95A-26H	26			305	610					1.5

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm
3. Per JACA No.49-2009



Available Sizes (mm)

Depth	Height	Width
65	200~610	200~1220

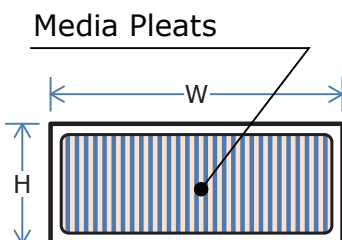
For horizontal airflows, install filters with pleats perpendicular to the ground.

Please contact us regarding availability of custom sizes.

Eco Long Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Pressure Drop (Pa)		Salt Arrestance (%) ³	Weight (kg)
		Initial	Max	Final	Height	Width	Depth	0.4μm ⁽¹⁾	0.7μm ⁽²⁾	
ADL6□-70F	70	70	350	610	610	120	50+	60+	–	3.8
ADL6□-33V	33			610	305					2.2
ADL6□-33H	33			305	610					2.3
ADL9□-70F	70	110	350	610	610	120	80+	90+	90+	3.9
ADL9□-33V	33			610	305					2.2
ADL9□-33H	33			305	610					2.3
ADL95□-70F	70	155	350	610	610	120	85+	95+	95+	4
ADL95□-33V	33			610	305					2.2
ADL95□-33H	33			305	610					2.3

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm
3. Per JACA No.49-2009



Available Sizes (mm)

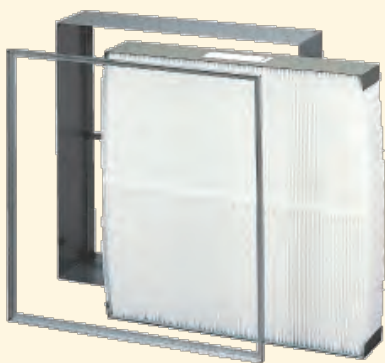
Depth	Height	Width
120	200~610	200~1000

For horizontal airflows, install filters with pleats perpendicular to the ground.

Please contact us regarding availability of custom sizes.

Aero Answer Eco Pack Medium/High Efficiency Filter

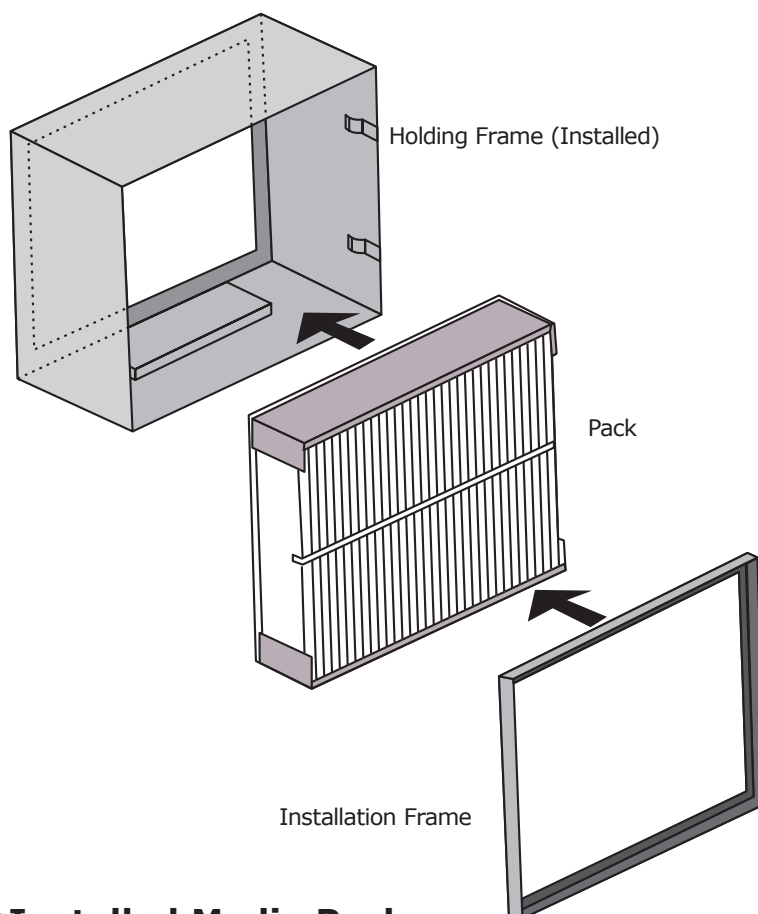
AERO-ANSWER ECO PACK



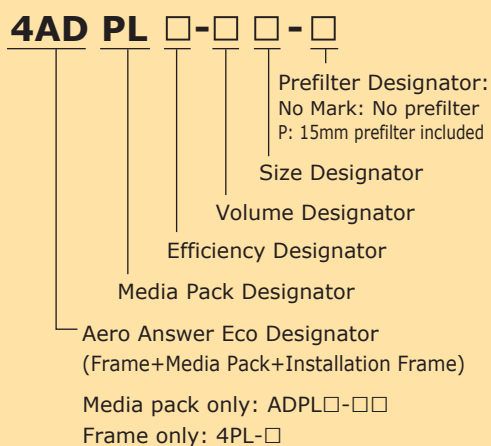
- Antistatic media
- Easy media pack replacement
- Frame replacement not necessary
- Incinerable media packs
- Optional prefilter
- Space-efficient 150mm depth
- Also effective for seasalt

Model	4ADPL-□-□□-□
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	50%+ at 0.4μm / 60%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

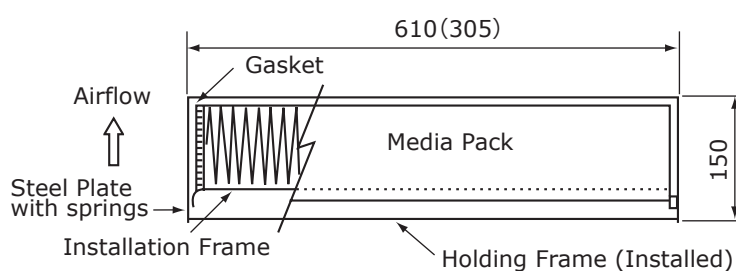
◇ Media Pack Replacement



Model Designators



◇ Installed Media Pack



Eco Mate Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Salt Arrestance (%) ³	Weight ⁴ (kg)
		Initial	Max	Height	Width	Depth	0.4µm ¹	0.7µm ²		
4ADPL6-70F	70	80	350	610	610	150	50+	60+	–	1.9
4ADPL6-33V	33			610	305					1
4ADPL6-33H	33			305	610					1.2
4ADPL9-70F	70	125	350	610	610	150	80+	90+	90+	2
4ADPL9-33V	33			610	305					1
4ADPL9-33H	33			305	610					1.2
4ADPL95-70F	70	170	350	610	610	150	85+	95+	95+	2
4ADPL95-33V	33			610	305					1
4ADPL95-33H	33			305	610					1.2

1. Geometric Average of 0.3~0.5µm
2. Geometric Average of 0.5~1.0µm
3. Per JACA No.49-2009
4. Media pack weights
Custom sizes not available.

Media Packs

Model	External Dimensions (mm)		
	Height	Width	Depth
ADPL□-70F	595	595	114
ADPL□-33V	595	290	
ADPL□-33H	290	595	

Installation Frames

Model	External Dimensions (mm)		
	Height	Width	Depth
4PL-F	610	610	150
4PL-V	610	305	
4PL-H	305	610	

Component Materials / Usage Conditions

Model		4ADPL
Component Materials	Media	Non-Woven Fiber
	Separator	Embossing + Thermoplastic Resin
	Frame	Fire Resistant Paper
	Sealant	Thermoplastic Resin
	Gasket	EPDM
	Installation Frame	Stainless Steel
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100

Aero Answer Eco Wing Medium/High Efficiency Filter

AERO-ANSWER ECO WING

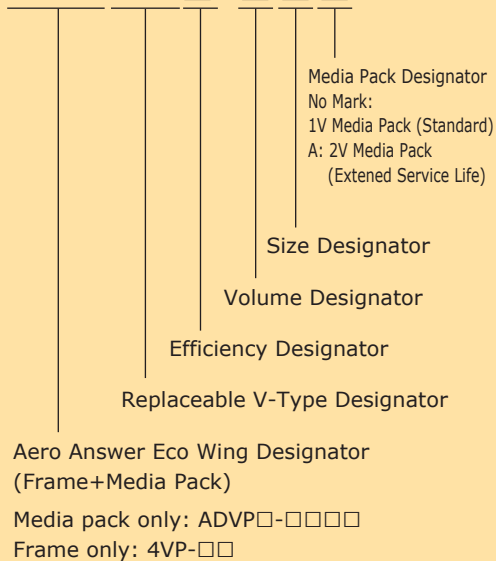


- Antistatic media
- Replaceable V-type media packs
- Incinerable media packs
- Dimensions compatible with comparable 292mm depth filters
- Also effective for seasalt

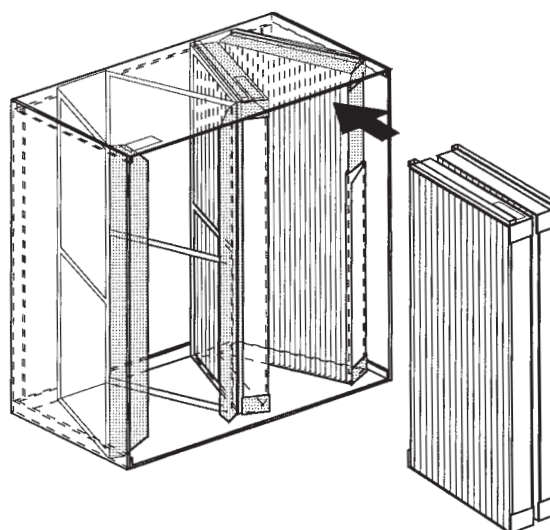
Model	4ADVP□-□□□
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	50%+ at 0.4μm / 60%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

Model Designators

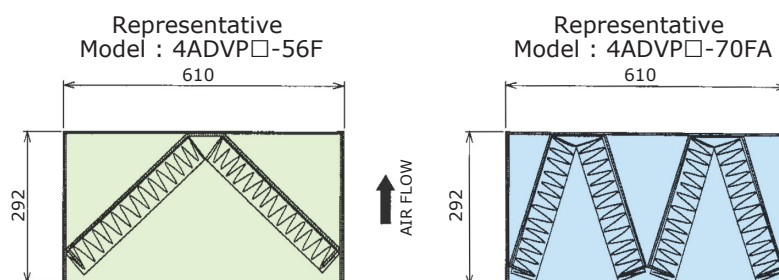
4AD VP□-□□□



Media Pack Replacement



Installed Media Pack



Eco Mate Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Salt Arrestance (%)³	Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4µm¹	0.7µm²		
4ADVP6-70FA	70	100	245	610	610	292	50+	60+	—	2.3
4ADVP6-35VA	35			610	305					1.2
4ADVP6-35HA	35			305	610					1.3
4ADVP6-56F	56	55		610	610					1.4
4ADVP6-28V	28			610	305					0.7
4ADVP6-28H	28			305	610					0.8
4ADVP9-70FA	70	120	350	610	610		80+	90+	90+	2.4
4ADVP9-35VA	35			610	305					1.3
4ADVP9-35HA	35			305	610					1.5
4ADVP9-56F	56	100		610	610					1.5
4ADVP9-28V	28			610	305					0.9
4ADVP9-28H	28			305	610					1
4ADVP95-70FA	70	150		610	610		85+	95+	95+	2.4
4ADVP95-35VA	35			610	305					1.3
4ADVP95-35HA	35			305	610					1.5
4ADVP95-56F	56	140		610	610					1.5
4ADVP95-28V	28			610	305					0.9
4ADVP95-28H	28			305	610					1

1. Geometric Average of 0.3~0.5μm

2. Geometric Average of 0.5~1.0μm

3. Per JACA No.49-2009

Custom sizes not available.

Installation Frame

Type	External Dimensions (mm)			Frame Model
	Height	Width	Depth	
1V	610	610	292	4VP-F
	610	305		4VP-V
	305	610		4VP-H
2V	610	610		4VP-FA
	610	305		4VP-VA
	305	610		4VP-HA

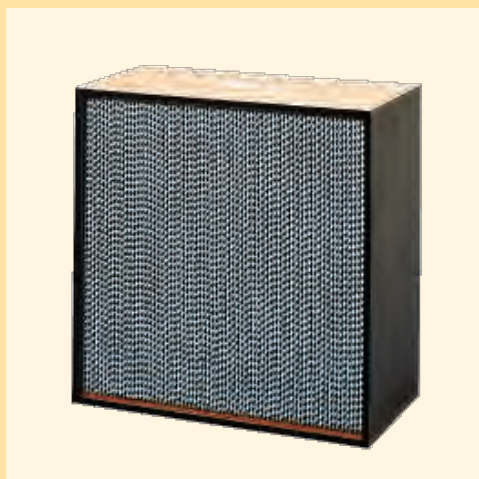
Media Packs

(Upstream Replacement Type)

Model	External Dimensions (mm)			
	Height	Width	Depth	No. of Media Packs
ADVP□-70FA	603	274	63	4
ADVP□-35VA				2
ADVP□-56F		344		2
ADVP□-28V				1
ADVP□-35HA	298	274		4
ADVP□-28H		344		2

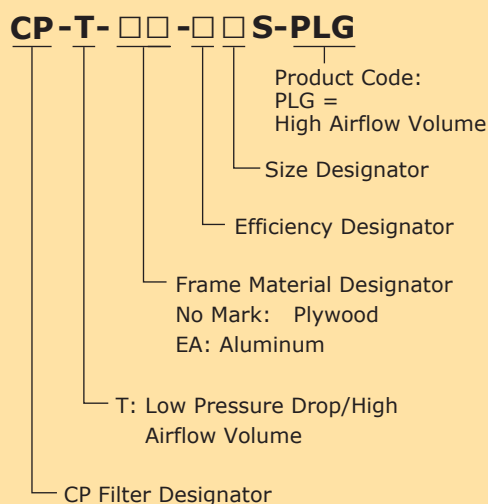
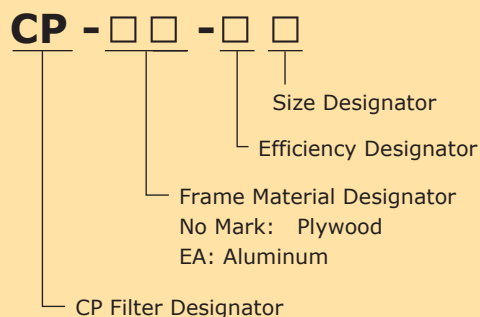
Component Materials/Usage Conditions

Model		4ADVP
Component Materials	Media	Non-Woven Fiber
	Separator	Embossing + Hotmelt
	Frame	Fire Resistant Paper
	Sealant	Thermoplastic Resin
	Gasket	Polyurethane
	Installation Frame	Stainless Steel
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



- Standardized Medium to High Efficiency Filter, suitable for most applications
- High-strength design; Aluminum separators
- Very effective in air circulation systems

Model Designators



CP Filter

Separator Type

Medium/High Efficiency Filter

CP FILTER

Model	CP-□□ / CP-T-□□-□□□
Test Method	JIS B 9908:2011 Type 2
Average Efficiency	55%+ at 0.4μm / 65%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm

Component Materials / Usage Conditions

Product Code		CP-□□	CP-EA-□□
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Plywood	Aluminum
	Sealant	Hot Melt Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	80	
	Max. Peak Temperature (°C)	90	
	Max. Peak Humidity (%RH at No Condensation)	100	

Product Code		CP-T-□□S	CP-T-EA-□□S
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Plywood	Aluminum
	Sealant	Hot Melt Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	80	
	Max. Peak Temperature (°C)	90	
	Max. Peak Humidity (%RH at No Condensation)	100	

Product Code		CP-T-□□S-PLG	CP-T-EA-□□S-PLG
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Plywood	Aluminum
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	80	
	Max. Peak Temperature (°C)	90	
	Max. Peak Humidity (%RH at No Condensation)	100	

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial	Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²
CP-9A / CP-EA-9A	56	137	343	610	610	292	80+	90+	8/9.2
CP-6A / CP-EA-6A		98	245				55+	65+	
CP-9C / CP-EA-9C	28	137	343	610	305	292	80+	90+	4.9/5.8
CP-6C / CP-EA-6C		98	245				55+	65+	
CP-9B / CP-EA-9B	28	88	245	610	610	150	80+	90+	4.1/4.6
CP-6B / CP-EA-6B		39	147				55+	65+	
CP-9D / CP-EA-9D	14	88	245	610	305	150	80+	90+	2.5/2.9
CP-6D / CP-EA-6D		39	147				55+	65+	

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

Low Pressure Drop Specifications

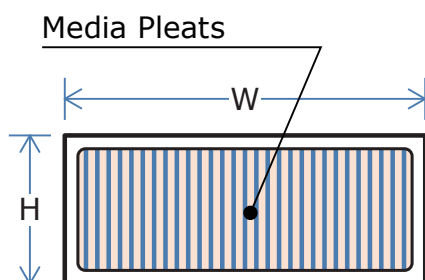
Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial	Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²
CP-T-9AS / CP-T-EA-9AS	56	98	343	610	610	292	80+	90+	10/11.3
CP-T-6AS / CP-T-EA-6AS		78	294				55+	65+	
CP-T-9CS / CP-T-EA-9CS	28	98	343	610	305	292	80+	90+	5.8/6.8
CP-T-6CS / CP-T-EA-6CS		78	294				55+	65+	

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

High Airflow Volume Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial	Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²
CP-T-9AS-PLG	70	137	343	610	610	292	80+	90+	10
CP-T-EA-9AS-PLG							80+	90+	11.3
CP-T-6AS-PLG		118	294	610	610	292	55+	65+	10
CP-T-EA-6AS-PLG							55+	65+	11.3
CP-T-9CS-PLG	35	137	343	610	305	292	80+	90+	5.8
CP-T-EA-9CS-PLG							80+	90+	6.8
CP-T-6CS-PLG		118	294	610	305	292	55+	65+	5.8
CP-T-EA-6CS-PLG							55+	65+	6.8

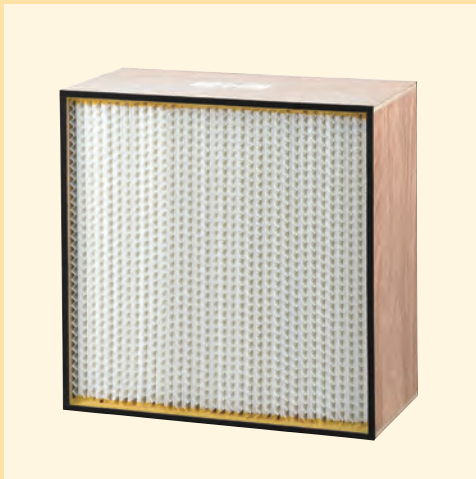
1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm



Available Sizes (mm)

Depth	Max Height	Max Width
150	610	915
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground. Please contact us regarding availability of custom sizes.



- For arrestance of airborne particulate sea salt
- Anti-scattering double-ply media
- Sturdy, polypropylene separator
- Can replace conventional filters

CP-J Filter

Separator Type

Salt Arrestance Filter

CP-J FILTER

Model	CP-J-9 □ SR
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	85%+ at 0.4μm / 95%+ at 0.7μm

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Salt Arrestance (%) ³	Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²		
CP-J-9ASR	56	177	343	610	610	292	85+	95+	95+	10.1
CP-J-9BSR	28	127	245	610	610	150				5.1
CP-J-9CSR	28	177	343	610	305	292				5.9
CP-J-9DSR	14	127	245	610	305	150				3

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm
3. Per JACA No.49-2009

Component Materials / Usage Conditions

Model		CP-J-9 □ SR
Component Materials	Media	Two-Ply Glass Fiber
	Separator	Polypropylene
	Frame	Plywood
	Sealant	Chloroprene
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

CP-J - 9 □ SR

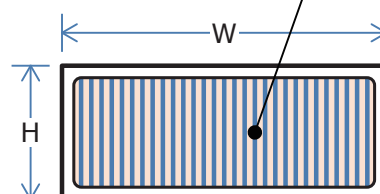
Salt Arrestance Designator

Size Designator

Efficiency Designator

CP Filter Designator

Media Pleats



Available Sizes (mm)

Depth	Max Height	Max Width
150	610	915
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground.

Please contact us regarding availability of custom sizes.



- Space-saving, lightweight design
- Up- and downstream aluminum lath protective face guards

CP Filter

Minipleat Type

Medium/High Efficiency Filter

CP FILTER

Model	□ T - □ G
Test Method	JIS B 9908 : 2011 Type 2
Average Efficiency	55%+ at 0.4μm / 65%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²	
6T-320G	26	108	343	610	305	65	55	65	2.1
6T-600G	56			610	610				3.7
6T-830G	70			610	762				4.4
9T-320G	26	147	343	610	305	65	80	90	2.1
9T-600G	56			610	610				3.7
9T-830G	70			610	762				4.4

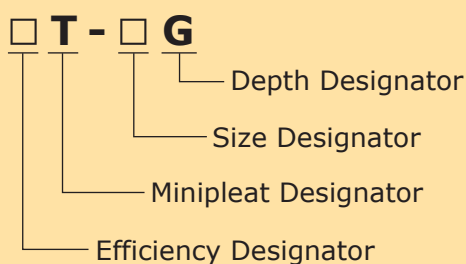
1. Geometric Average of 0.3~0.5μm

2. Geometric Average of 0.5~1.0μm

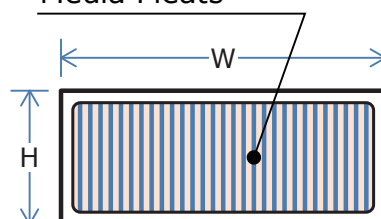
Component Materials / Usage Conditions

Model		□ T - □ G
Component Materials	Media	Glass Fiber
	Separator	Hot Melt Resin
	Frame	Aluminum
	Face Guard	Aluminum Lath
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators



Media Pleats



Available Sizes (mm)

Depth	Max Height	Max Width
65	762	1219

For horizontal airflows, install filters with pleats perpendicular to the ground.

Please contact us regarding availability of custom sizes.



- Low pressure drop,
long service life bag type filter
- Large Particle Retention Volume
- Light weight and easy to handle

Neo-Flo Filter

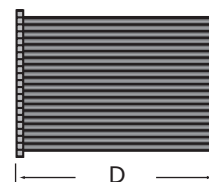
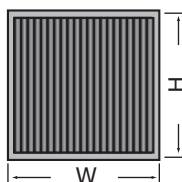
Bag Type

Medium/High Efficiency Filter

NEO-FLO

Model	43□-□C
Test Method	JIS B 9908:2011 Type 2
Average Efficiency	55%+ at 0.4μm / 65%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

Cartridges



Model Designators

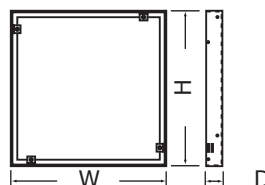
43 □ - □ C

Efficiency Designator

Size Designator

Neo-Flo Designator
(Holding Frame+Media Cartridge)
Media Cartridge only: 3□-□
Holding Frame only: 4SP or 4UR

Holding Frames



Model	External Dimensions (mm)			Holding Frame
	Height	Width	Depth	
3SC-□C · 3S-□C	592	592	940	4SD-DW, 4UR-DW Series
3XC-□C · 3X-□C			760	
3PC-□C · 3P-□C			560	
3SS-□C			380	
3UC-□C · 3U-□C	287	287	940	
3ZC-□C · 3Z-□C			760	
3RC-□C · 3R-□C			560	
3UU-□C			380	

Model	External Dimensions (mm)			Material	Prefilter Installable
	Height	Width	Depth		
4SP-DW-NT	610	610	75	Steel Plate	No
4SP-DW-SUS-NT				Stainless Steel	
4SP-DW-NL				Steel Plate	Yes
4SP-DW-SUS-NL				Stainless Steel	
4UR-DW-NT		305		Steel Plate	No
4UR-DW-SUS-NT				Stainless Steel	
4UR-DW-NL				Steel Plate	Yes
4UR-DW-SUS-NL				Stainless Steel	

Standard Specifications

●Full Size

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Pockets	Media (m²)	Weight (kg)	Arrestance Efficiency (%)	
		Initial	Max	Height	Width	Depth				0.4µm¹	0.7µm²
43SC-95C	70	147	294	610	610	940	8	8.8	6.3	85+	95+
43SC-85C		118	245							80+	90+
43SC-65C		59	147							55+	65+
43XC-95C	55	127	294	610	610	760	8	7.0	6.0	85+	95+
43XC-85C		88	245							80+	90+
43XC-65C		59	147							55+	65+
43PC-95C	40	118	294	610	610	560	8	5.0	5.6	85+	95+
43PC-85C		78	245							80+	90+
43PC-65C		29	147							55+	65+
43S-95C	70	137	294	610	610	940	10	11.0	6.7	85+	95+
43S-85C		98	245							80+	90+
43S-65C		69	147							55+	65+
43X-95C	55	127	294	610	610	760	10	8.7	6.3	85+	95+
43X-85C		78	245							80+	90+
43X-65C		59	147							55+	65+
43P-95C	40	108	294	610	610	560	10	6.3	5.9	85+	95+
43P-85C		59	245							80+	90+
43P-65C		39	147							55+	65+
43SS-95C	40	118	294	610	610	380	12	5.7	5.8	85+	95+
43SS-85C		88	245							80+	90+
43SS-65C		59	147							55+	65+

●Half Size

43UC-95C	35	147	294	610	305	940	4	4.4	4.6	85+	95+
43UC-85C		118	245							80+	90+
43UC-65C		59	147							55+	65+
43ZC-95C	27	127	294	610	305	760	4	3.5	4.4	85+	95+
43ZC-85C		88	245							80+	90+
43ZC-65C		59	147							55+	65+
43RC-95C	20	118	294	610	305	560	4	2.5	4.1	85+	95+
43RC-85C		78	245							80+	90+
43RC-65C		29	147							55+	65+
43U-95C	35	137	294	610	305	940	5	5.5	4.8	85+	95+
43U-85C		98	245							80+	90+
43U-65C		69	147							55+	65+
43Z-95C	27	127	294	610	305	760	5	4.3	4.5	85+	95+
43Z-85C		78	245							80+	90+
43Z-65C		59	147							55+	65+
43R-95C	20	108	294	610	305	560	5	3.1	4.2	85+	95+
43R-85C		59	245							80+	90+
43R-65C		39	147							55+	65+
43UU-95C	20	118	294	610	305	380	6	2.4	4.1	85+	95+
43UU-85C		88	245							80+	90+
43UU-65C		59	147							55+	65+

1. Geometric Average of 0.3~0.5µm 2. Geometric Average of 0.5~1.0µm
External dimensions include holding frames. Custom sizes not available.

Cartridge Component Materials / Usage Conditions

Model		3□-□C
Component Materials	Media	Glass Fiber
	Frame	Aluminum
	Corner Sealant	ABS Resin
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



- Service life 1.5~2 times longer than comparable filters
- Effective removal of large atmospheric particles and pollen

AP Filter

Separator Type

Medium/High Efficiency Filter

AP FILTER

Model	AP-□-□□C
Test Method	JIS B 9908:2011 Type 2
Average Efficiency	55%+ at 0.4μm / 65%+ at 0.7μm 80%+ at 0.4μm / 90%+ at 0.7μm

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²	
AP-9-56C	56	137	343	610	610	292	80+	90+	10
AP-6-56C		78	245				55+	65+	
AP-9-28VC	28	137	343	610*	305*		80+	90+	5.9
AP-6-28VC		78	245				55+	65+	

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

*Half size models may be installed both vertically or horizontally.
Custom sizes not available.

Model Designators

AP - □ - □□C

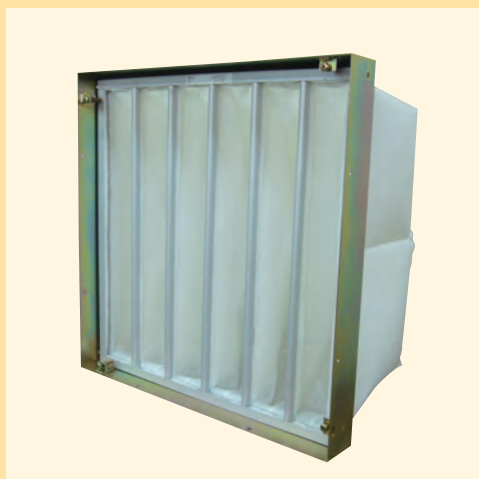
Size/Volume Designator

Efficiency Designator

AP Filter Designator

Component Materials / Usage Conditions

Model		AP-□-□□C
Component Materials	Media	Glass Fiber (with Zinc-Plated Face Grill)
	Separator	Plastic
	Frame	Zinc-Plated Steel Plate
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



- Optimal for coarse particle removal
- Large Particle Retention Volume
- Long Service Life
- Easy-to-Handle, Lightweight Design

Neo-Cap Filter

Bag Type

Coarse Particle Efficiency Filter

NEO-CAP

Model	45NC-□
Test Method	JIS B 9908:2011 Type 3 (Gravimetric)
Efficiency	80%+

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Cartridge Dimensions (mm)		Arrestance Efficiency (%)	Weight (kg)
		Initial Max	Final	Height	Width	Depth	Height	Width		
45NC-750	22	39	147	610	305	273	592	287	80+	3.3
45NC-1000	28			508	508		490	490		3.6
45NC-1200	34			610	508		592	490		3.7
45NC-1500	45			610	610		592	592		3.9
45NC-1250	35	69	147	610	305	403	592	287		3.4
45NC-1750	49			508	508		490	490		3.7
45NC-2000	57			610	508		592	490		3.9
45NC-2500	71			610	610		592	592		4.1

Custom sizes not available.

Model Designators

45NC - □

Size Designator

Neo-Cap Designator

Cartridges Only: 5NC-□

Installation Frame Only: 4NC-□

Installation Frame

Model	External Dimensions (mm)			Neo-Cap Model
	Height	Width	Depth	
4SP-DW-NT	610	610	75	5NC-1500/2500
4TQ-DW-NT	610	508		5NC-1200/2000
4LM-DW-NT	508	508		5NC-1000/1750
4UR-DW-NT	610	305		5NC- 750/1250

Cartridge Component Materials / Usage Conditions

Model		45NC-□
Component Materials	Media	Non-Woven Fiber
	Frame	Aluminum
	Corner Sealant	ABS Resin
	Installation Frame	Chromate-Coated Steel Plate
Usage Conditions	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



- Ideal for large particle removal
- Strong structure includes metal lath on downstream face
- Removable media may be cleaned for re-use
- Low profile, low pressure drop
- Light-weight and easy to handle

Hi-Pac Prefilter

Panel Type

Coarse Particle Efficiency Filter

HI-PAC

Model	PK-□-□-□
Test Method	JIS B 9908:2011 Type 3 (Gravimetric)
Efficiency	60%+

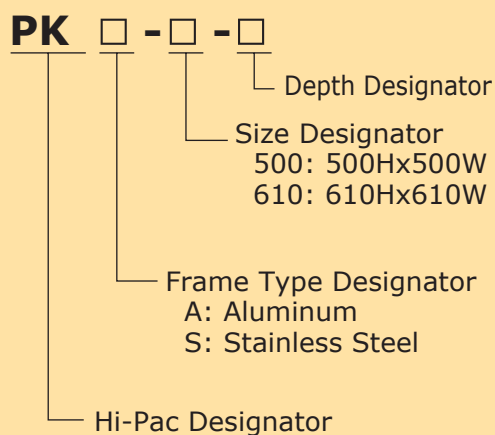
Standard Specifications

Model	Rated Airflow (m³/min)	Max. Pressure Drop (Pa)	Min. Average Efficiency (%)	External Dimensions (mm)			
				Height	Width	Depth	Thickness
PK□-500-25	37	93	60	500	500	25	18
PK□-610-25	56			610	610		

Component Materials / Usage Conditions

Model		PKA	PKS
Component Materials	Media	Non-Woven Fiber	
	Frame	Aluminum	Stainless Steel
Usage Conditions	Reusable	Yes	
	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model Designators



Filter Holding/Mounting Frames

Mounting Frames

Model	External Dimensions (mm)			Applicable Filters
	Height	Width	Depth	
4NA-450	680	375	50	1□-450
4NA-600		680		1□-600
4NA-830		832		1□-830
4NA-980		985		1□-980
4NA-1000		680		1□-1000
4NA-1250		832		1□-1250

• Available in galvanized sheet iron or stainless steel. Please specify when ordering.

Holding Frames

Model	External Dimensions (mm)			Applicable Filters
	Height	Width	Depth	
4N-1000	625	625	325	CP, AP, N2-CP and CP-J Types
4N-600			180	
4N-450		325	325	
4N-320			180	
9N-320	625	320	100	ADM Type
9N-600		625		

• Available in baked finish sheet metal or stainless steel. Please specify when ordering.

CamRoll

Auto-Winding Roll Filter

CAMROLL

Model	C□□-□-□□□
Test Method	JIS B 9908:2011 Type 3 (Gravimetric)
Efficiency	60%+

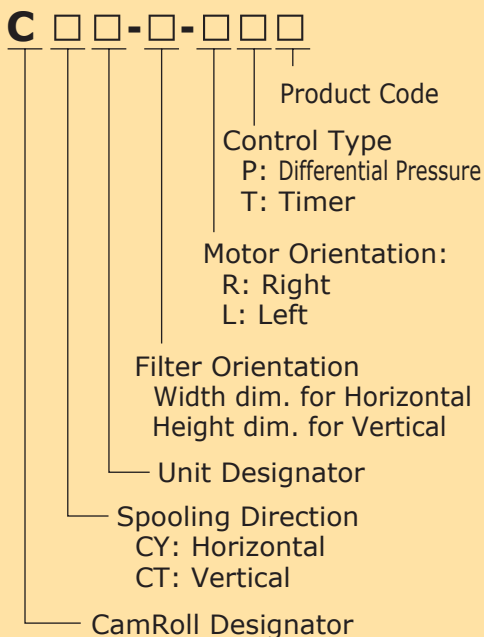
- Optimal for use with AHUs
- Work-reducing, fully automated media advancement
- Optional timer or differential pressure control

Specifications

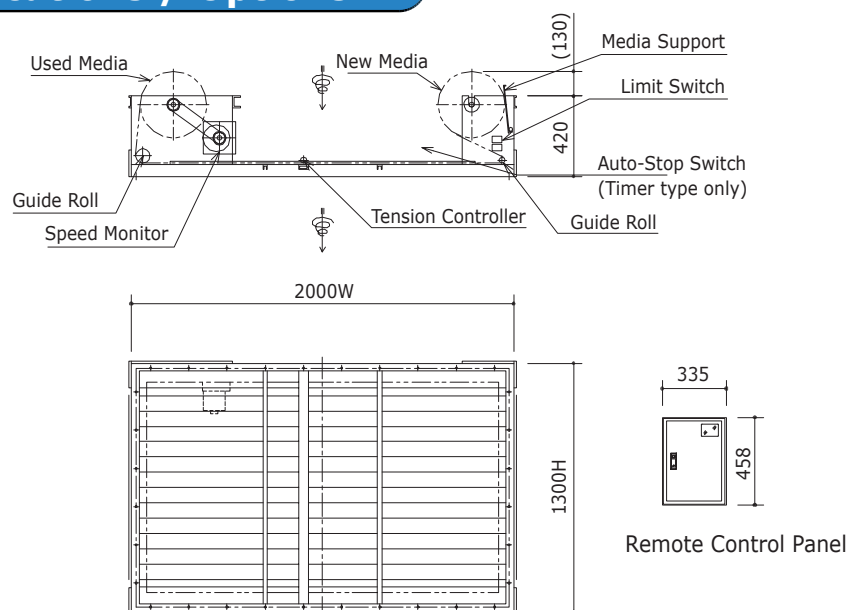
Frame	Material	Steel Plate with Baked Enamel Finish
	Color	Gray (Munsell N7.5)
Media	Average Efficiency (%)	60+
	Max Pressure Drop (Pa)	59
Power Supply		3 Phase 200/220V, 50/60H
Control Panel		Power Lamp, Wind-Complete Lamp, Operation Circuit Fuse, OCR, Differential Pressure Gauge
Control Options		Differential Pressure Timer
Operation		Auto-Off-Wind Toggle Switch
Outlet Air Velocity		2.5m/sec

Please use only with ELB installed at the primary power supply.

Model Designators



Specifications / Options



Model # CCYM-200-RT

Auto-Winding Control Options

Differential Pressure
Timer
Timer/Differential Pressure Toggle
Manual

Auto-Winding Control Options

Automatic Operation Circuit
Wind Operation Circuit
Malfunction Display Circuit

Maintenance Access:

Upstream

Table of Airflow Volumes

Horizontal Type

Upper Values: Airflow Volume (m²/h)
Lower Values: Weight (kg)

Size	Designator	S	A	D	M	C	B	L
	W (mm) H (mm)	700	900	1100	1300	1500	1700	1000
100	1000	3030 66	5440 74					
120	1200	4870 68	6740 76	8610 80				
140	1400	6800 70	8040 78	10270 82	12500 80			
160	1600	6740 72	9330 80	11920 84	14520 91	17110 98		
180	1800	7680 74	10630 82	13680 86	16530 93	10480 100	22440 112	
200	2000	8610 76	11920 84	16240 88	18550 95	21860 102	25170 114	28480 120
220	2200	9660 77	13220 86	16800 90	20570 97	24240 104	27010 116	31580 122
240	2400	10480 81	14520 88	18660 92	22580 99	26610 106	30640 118	34680 124
260	2600		15810 90	20200 94	24600 101	28000 108	33380 120	37770 126
280	2800		17110 92	21860 96	26610 103	31360 110	36120 122	40870 128
300	3000			23620 98	28630 105	33740 112	38850 124	43060 130
320	3200			26170 100	30640 107	36120 114	41500 125	47060 132
340	3400				32660 100	38400 116	44320 128	50160 134
360	3600				34680 111	40870 118	47060 130	53260 136
380	3800					43240 120	49780 132	56360 138
400	4000						52630 134	59440 140
420	4200							62540 142
Filter Roll size (m) x Qty		0.6×1	0.8×1	1.0×1	1.2×1	1.4×1	1.6×1	1.8×1

Airflow volumes calculated at face velocity = 2.5m/s.
Volumes for vertical CamRoll roll filters are identical.
Vertical type CamRolls can also be provided in double- and triple-linked systems.

ChemArrest®

Chemical Contaminant Arrestance Filters

ChemArrest

ChemArrest Features

Pleated and Tray Type ChemArrest Chemical Filters available.

Appropriate combinations of ChemArrest Filters may be employed for several applications including recirculation and makeup air handling, cleanrooms and FFUs.

Tray Type ChemArrest Filters

- Multiple cartridge structure containing specified adsorbents for varied applications
- In comparison with pleated filters, Tray Type ChemArrest Filters contain a much higher volume of adsorbents
- High concentration contaminant arrestance + extended service life
- Specialized, high quality design reduces leaks resulting from airflow bypassing adsorbents
- High removal efficiency
- Easy cartridge replacement

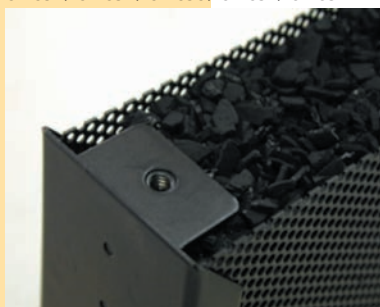
Pleated Type ChemArrest Filters

ChemArrest filtration media is composed of non-woven media, in which fibers form three-dimensional matrices which hold granular adsorbents consistently. Media attributes include:

- Fine granular and high efficiency adsorbents provide fast and high-capacity absorption. Due to high adsorption volume, service life is significantly longer
- Adsorbents are evenly held in three-dimensional matrices, allowing for lower pressure drop
- Adsorbents are adhered to matrices so media particle emission and shedding is minimized
- Stable, high strength fibers and high efficiency adsorbents prevent secondary contamination by organic and inorganic components. Additionally, other filter components such as sealant adhesives are carefully selected to prevent secondary contamination.

Tray Type ChemArrest Pellets

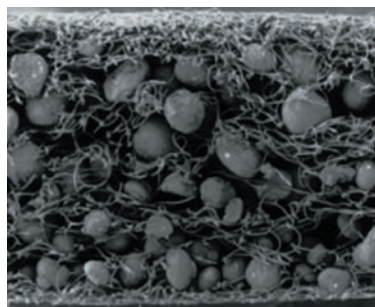
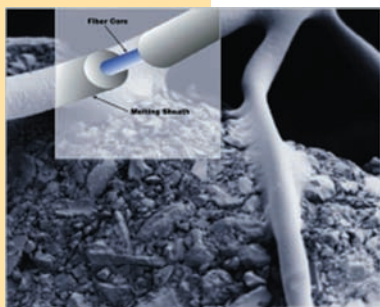
CB-CSA, CB-CSB, CB-CSC, CB-CSF, CB-CSX



CB-CSA1



Microscopic Photo of Pleated ChemArrest Filtration Media



Adsorbant Types

Tray Type ChemArrest Filters

Adsorbent Type	Applications	Representative Target Contaminants
CB-CSA Black, Crushed 4 x 10 mesh	Acidic Contaminant Arrestance	Ozone, Sulfurous Acidic Gases ($\text{SO}_2, \text{SO}_4^{2-}$), Hydrogen Sulfide (H_2S), Hydrogen Chloride (HCl), Hydrogen Fluoride (HF), Nitrogen Oxides ($\text{NO}_2, \text{NO}_2^-, \text{NO}_3^-$), Formic Acid (HCOOH), Acetic Acid (CH_3COOH), Acidic Gases including Boron Compounds ($\text{H}_3\text{BO}_3, \text{BF}_3$ etc.), Methyl Mercaptan, Odorous Compounds
CB-CSA1 Violet, $\phi 3.2$ Spherical	Nitrogen Oxides, Sulfurous Gas Arrestance	Sulfurous Acidic Gases, Hydrogen Sulfide, Nitrogen Oxides including Methyl Mercaptan, Ethylene, Odorous Compounds
CB-CSB, CB-CSB1 Black, Crushed 4 x 10 mesh	Alkaline Arrestance	Ammonia, Trimethylamine, Organic Bases (eg. NMP), Odorous Compounds
CB-CSC Black, Crushed 4 x 8 mesh	Organic Compound Arrestance	Benzene, Toluene, Xylene, Styrolene (Solvents), Phthalic Acid Esters (DOP, DBP, DEP), Phosphate Esters, Glycerin Fatty Acid Esters (eg. Stearic Acid Ester), Cyclic Siloxanes (D3-D11), Phenolic Antioxidants (BHA, BHT), Organic Bases (NMP), Organic Acids, Alcohols, Organic Compounds including Aldehydes, Ozone, Sulfurous Acidic Gases, Methyl Disulfide, Odorous Compounds
CB-CSF Black, Crushed 4 x 8 mesh	Organic Compound Arrestance	Formaldehyde
CB-CSX Black, Crushed 4 x 8 mesh	Odor Removal, Sulfurous Gas Arrestance	Sulfurous Acidic Gases, Hydrogen Sulfide, other Odorous Compounds including Mercaptans

Pleated ChemArrest Filters

Target Contaminants	Representative Target Contaminants
Acidics	Sulfuric Acid, Hydrogen Sulfide, Hydrogen Chloride, Hydrogen Fluoride, Nitrogen Dioxide, Boric Acid, Phosphoric Acid, Formic Acid, Acetic Acid, Methyl Mercaptan, Ozone
Alkalines	Ammonia, Trimethylamine, Organic Bases (e.g. NMP)
Organic Compounds	Benzene, Toluene, Xylene, Styrene (Solvents), Phthalate Esters (e.g. DOP, DBP, DEP), Phosphate Esters (e.g. TBP, TEP, TMP), Fatty Acid Esters (e.g. Ethyl Stearate), Cyclic Siloxanes (e.g. D3-11), Phenol Antioxidants (e.g. BHA, BHT), Organic Bases (e.g. NMP), Organic Compounds such as Organic Acids, Alcohols, Aldehydes, Ozone, Sulfuric Acid, Methyl Disulfide

Tray Type Filter Selection

Filter models should be selected on the basis of the characteristic SV (Space Velocity) of each facility.

$SV (1h) = \text{Treated Airflow (m}^3/\text{h)} / \text{Fill Volume (m}^3\text{)}$

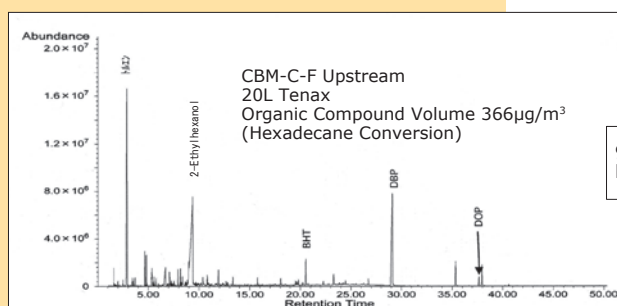
$\text{Treated Airflow (m}^3/\text{h)} = SV (1h) \times \text{Fill Volume (m}^3\text{)}$

Facility Type	Sample Target Contaminants	Facility SV Value
Semiconductor	Sulfur Compounds, Nitrogen Oxides, Ammonia, Hydrogen Chloride, Hydrogen Fluoride, Phosphorus Compounds, Boron Compounds, Siloxanes, Organic Compounds	5,000-30,000
Food Production, Pharmaceutical	Sulfur Compounds, Nitrogen Oxides, Ammonia, Methyl Mercaptan, Alcohols, Organic Acids	1,000-20,000
Medical	Sulfur Compounds, Nitrogen Oxides, Ammonia, Alcohols, Formaldehyde, Other Aldehydes, Organic Acids, Amines, Ethylene Oxide, Odorous Compounds	5,000-30,000
Museums/Libraries	Sulfur Compounds, Nitrogen Oxides, Ammonia, Ozone, Formaldehyde, Formic Acid, Acetic Acid, Peroxides	5,000-40,000
Animal Handling	Hydrogen Sulfide, Methyl Sulfide, Ammonia, Trimethylamine, Methyl Mercaptan, Organic Acids, Odorous Compounds	1,000-20,000
Printing	Toluene, Ethyl Acetate, Isopropyl Alcohol	500-10,000
Painting	Toluene, Xylene, Ethyl Acetate, Alcohols	500-10,000
Office Buildings/Schools	Sulfur Compounds, Nitrogen Oxides, Ammonia, Alcohols, Aldehydes	10,000-40,000
Sewage and Waste Treatment	Hydrogen Sulfide, Ammonia, Trimethylamine, Methyl Mercaptan, Methyl Sulfide, Methyl Disulfide, Organic Compounds, Odorous Compounds	1,000-10,000

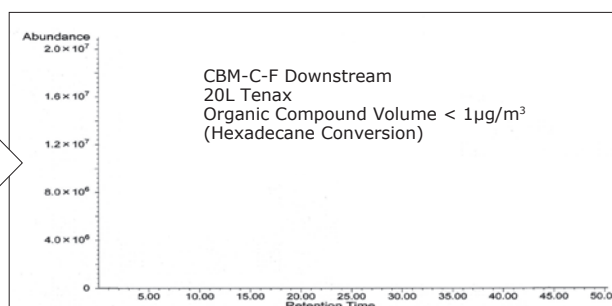
Measurement of Minipleat ChemArrest Arrestance Efficiency

GC/MS Arrestance Efficiency Results

Test Filter: CBM-C-F
 Test Airflow: 0.5m/s
 Test Conditions: 23°C 38%RH
 Sampling Method: Tenax Tube Capture
 Capture Volume: 20L (0.3L/min)
 Analysis Method: GC/MS Test Device



99%+ Efficiency



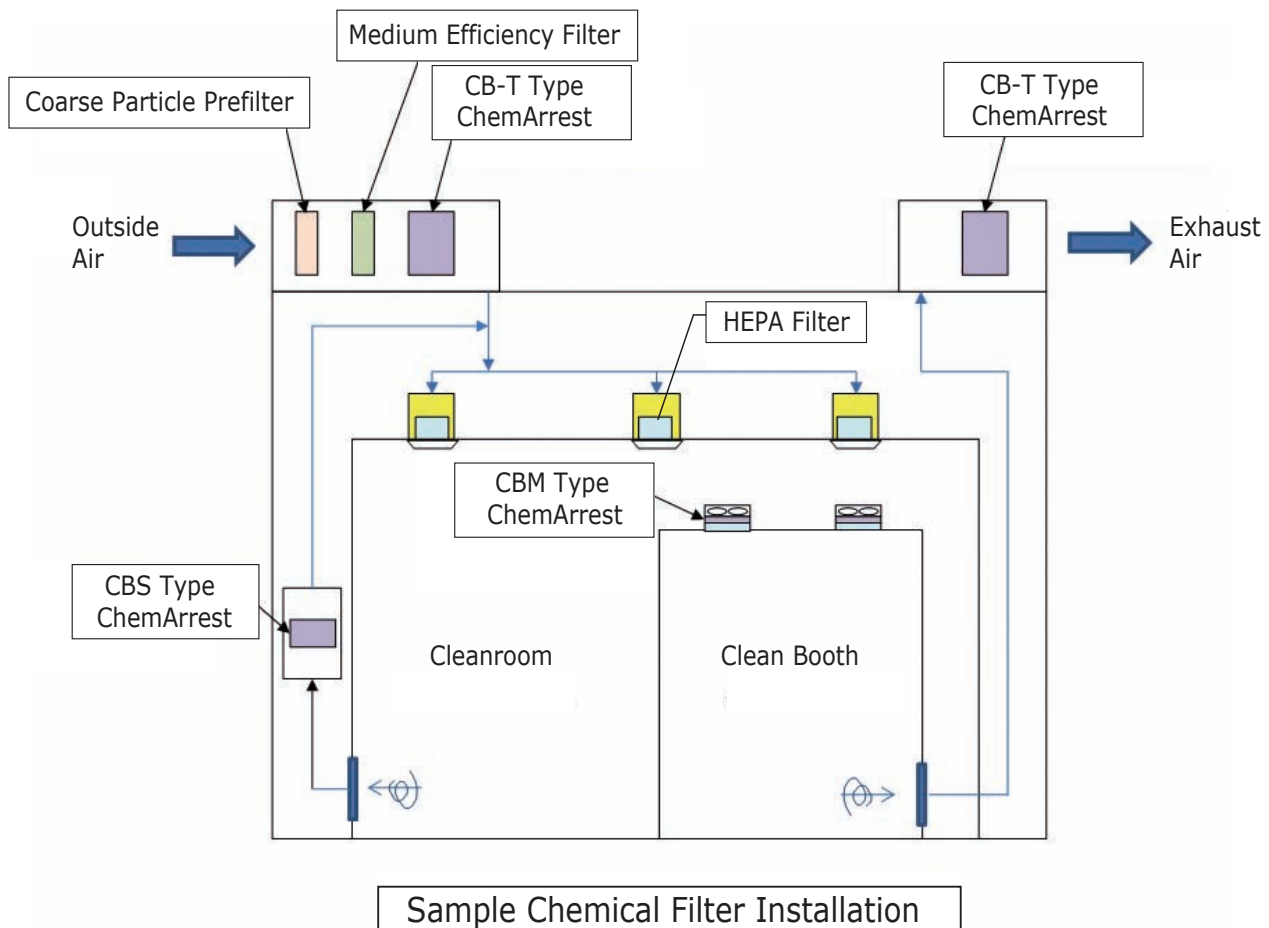
Chemical Filter Selection

ChemArrest filters are specialized air filters designed for the removal of gaseous contaminants and odors.

Tray type ChemArrest filters are recommended for high volume, long service life treatment of outside air or exhaust air.

For cleanrooms, clean booths, and other sensitive manufacturing facilities which require stringent contaminant removal, minipleat ChemArrest filters are recommended.

Separator type ChemArrest filters are optimal for chemical and odor removal and recirculated air.



Tray Type



- High contaminant arrestance/ extended service life
- Light-weight, easy to exchange cartridges
- May be used for both intake and exhaust treatment

Inline (Duct) Type



Model Designators

CB - □ - □ - □

Target Contaminants
 A: Acids
 A1: Sulfur Compounds
 B: Alkalines
 B1: Alkalines
 (Long Service Life)
 C: Organics
 F: Formaldehyde
 X: Odors (Mercaptans)

Size Designator

Product Code

T: Tray Type

D: Inline (Duct) Type

ChemArrest Designator

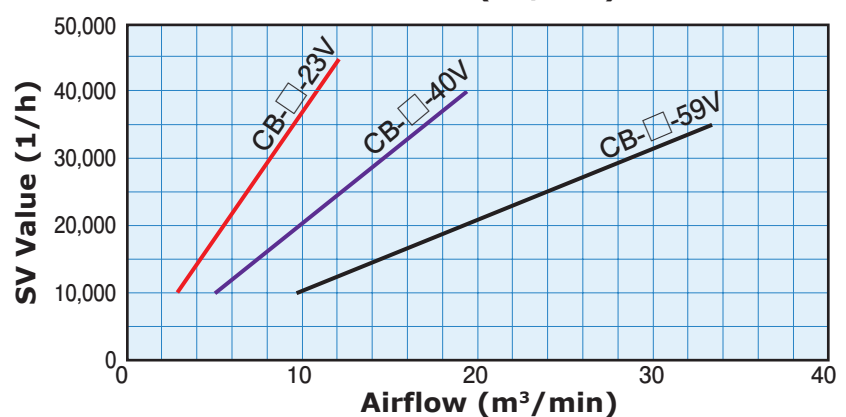
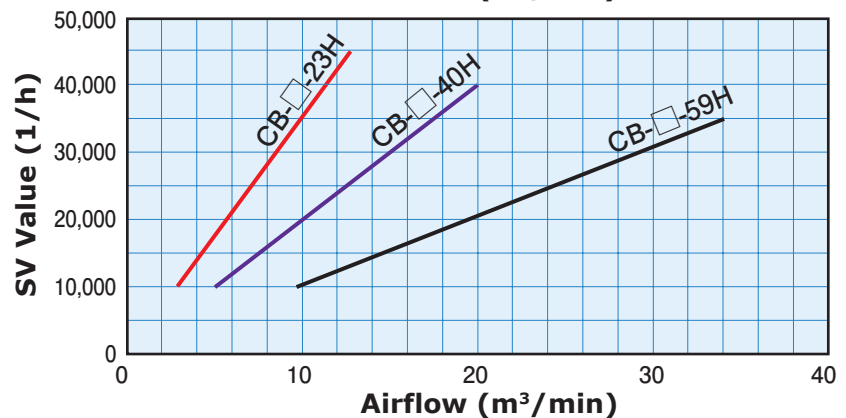
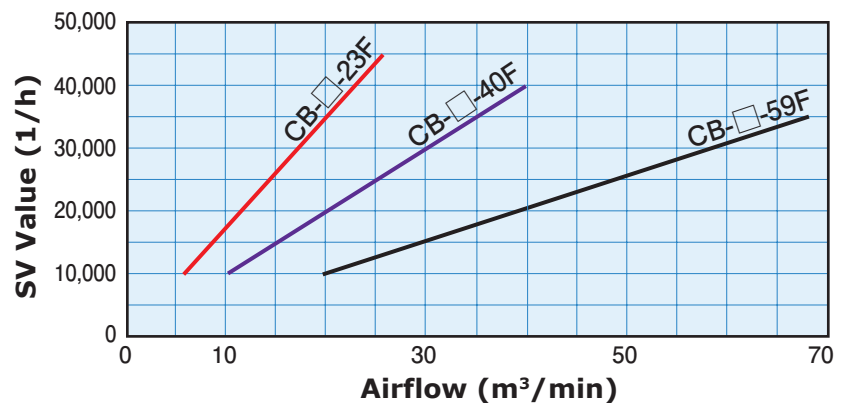
ChemArrest®

Tray Type Chemical / Odor Removal For High Contaminant Concentrations

ChemArrest

Model	CB-□-□-□
Types	Tray Type / Inline Tray Type
Frame	Steel Plate with Baked Enamel Finish

Airflow and Space Velocity



Tray Type Specifications

Model	Main Unit Dimensions (mm)			Cartridge Dimensions			Fill Volume (L)	Total Wt (kg)
	H	W	D	Model	W x Dx t	Qty		
CB-T-59F - □	610	610	660	CB-T-59F	600×590×45	8	115	122
CB-T-59H - □	305	610		CB-T-59H		4		
CB-T-59V - □	610	305		CB-T-59V	295×590×45	8	56	72
CB-T-59Q - □	305	305		CB-T-59Q		4		
CB-T-40F - □	610	610	460	CB-T-40F	600×400×35	8	59	71
CB-T-40H - □	305	610		CB-T-40H		4		
CB-T-40V - □	610	305		CB-T-40V	295×400×35	8	29	42
CB-T-40Q - □	305	305		CB-T-40Q		4		
CB-T-23F - □	610	610	290	CB-T-23F	600×230×35	8	34	48
CB-T-23H - □	305	610		CB-T-23H		4		
CB-T-23V - □	610	305		CB-T-23V	295×230×35	8	17	30
CB-T-23Q - □	305	305		CB-T-23Q		4		

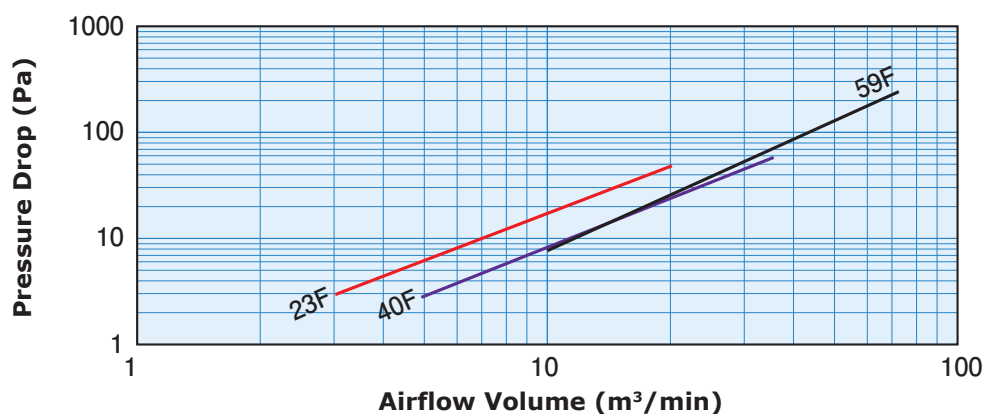
Estimated total weight is based on organic type specifications.
Custom sizes not available.

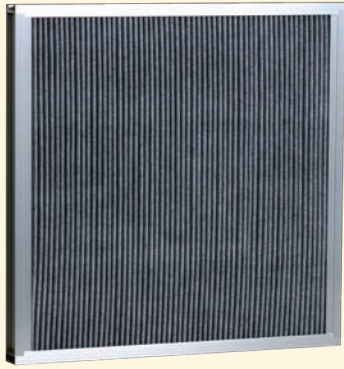
Inline (Duct) Tray Type Specifications

Model	Main Unit Dimensions (mm)			Cartridge Dimensions			Fill Volume (L)	Total Wt (kg)
	H	W	D	Model	W x Dx t	Qty		
CB-D-59F - □	650	605	790	CB-D-59F	600×590×45	8	115	143
CB-D-59H - □	350	605		CB-D-59H		4		
CB-D-59V - □	650	300		CB-D-59V	295×590×45	8	56	90
CB-D-59Q - □	350	300		CB-D-59Q		4		
CB-D-40F - □	650	605	600	CB-D-40F	600×400×35	8	59	84
CB-D-40H - □	350	605		CB-D-40H		4		
CB-D-40V - □	650	300		CB-D-40V	295×400×35	8	29	54
CB-D-40Q - □	350	300		CB-D-40Q		4		
CB-D-23F - □	650	605	430	CB-D-23F	600×230×35	8	34	62
CB-D-23H - □	350	605		CB-D-23H		4		
CB-D-23V - □	650	300		CB-D-23V	295×230×35	8	17	41
CB-D-23Q - □	350	300		CB-D-23Q		4		

Estimated total weight is based on organic type specifications.
Custom sizes not available.

Airflow and Pressure Drop





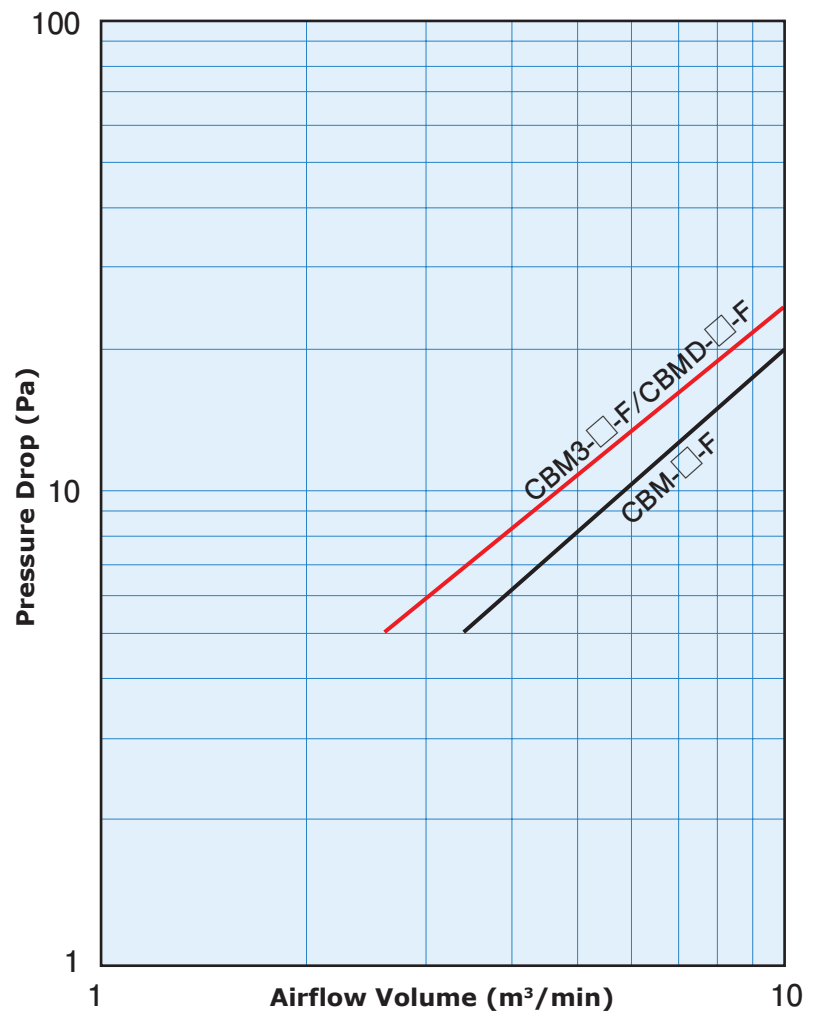
ChemArrest® Chemical Filter For Production Tools, Ceiling System FFUs

ChemArrest

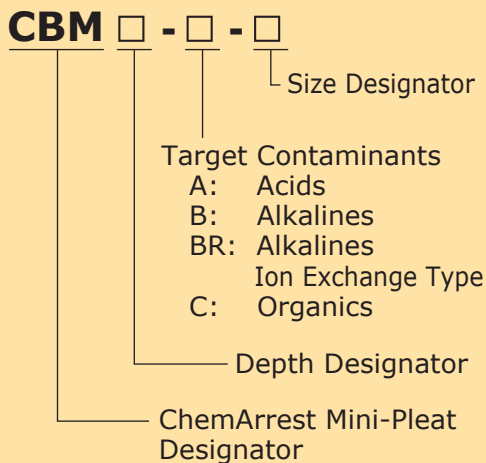
Model	CBM□-□-□
Type	Mini-Pleat Type

- Applications include Cleanrooms, FFUs (Fan Filter Units) and other precision manufacturing tools
- Most effective when used together with ULPA/HEPA Filters
- Ion exchange models available for alkaline and acidic usage environments

Pressure Drop



Model Designators



Standard Specifications - 50mm Depth Activated Carbon Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Acidic	CBM-A-F	10	20	610	610	50	3.9
	CBM-A-H	4.7		305	610		2.2
	CBM-A-V	4.7		610	305		2.2
Alkaline	CBM-B-F	10	20	610	610	50	3.9
	CBM-B-H	4.7		305	610		2.2
	CBM-B-V	4.7		610	305		2.2
Organic	CBM-C-F	10	20	610	610	50	3.3
	CBM-C-H	4.7		305	610		1.9
	CBM-C-V	4.7		610	305		1.9

Standard Specifications - 50mm Depth Ion Exchange Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Alkaline	CBM-BR-F	10	20	610	610	50	4.4
	CBM-BR-H	4.7		305	610		2.5
	CBM-BR-V	4.7		610	305		2.4
	CBMD-BR-F	10	25	610	610		2.8
	CBMD-BR-H	4.7		305	610		1.7
	CBMD-BR-V	4.7		610	305		1.7

Standard Specifications - 30mm Depth Activated Carbon Type

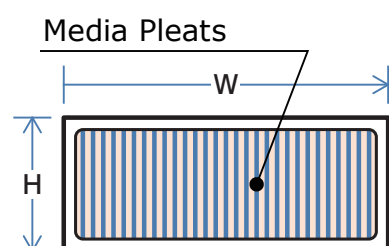
Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Acidic	CBM3-A-F	10	25	610	610	30	2.4
	CBM3-A-H	4.7		305	610		1.4
	CBM3-A-V	4.7		610	305		1.4
Alkaline	CBM3-B-F	10	25	610	610	30	2.4
	CBM3-B-H	4.7		305	610		1.4
	CBM3-B-V	4.7		610	305		1.4
Organic	CBM3-C-F	10	25	610	610	30	2.1
	CBM3-C-H	4.7		305	610		1.2
	CBM3-C-V	4.7		610	305		1.2

Multistage Applications:

- Configuration for mixed contaminants (e.g. Organic + Alkaline + Acidic)
- Multistage (e.g. 2~5 layers) configuration for extended service life

Component Materials

Model		CBM□-□-□
Component Materials	Media	Non-Woven Media + Granular Activated Carbon or Ion Exchange Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Thermoplastic Resin
	Gasket	EPDM



Available Sizes (mm)

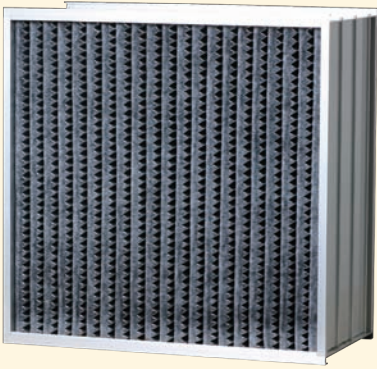
Depth	Max Height	Max Width
50	610	1500
30	610	1220

For horizontal airflows, install filters with pleats perpendicular to the ground. Please contact us regarding availability of custom sizes.

ChemArrest®

Chemical Filter Separator Type

ChemArrest



- Optimal for cleanroom recirculation
- Ion exchange extended service life models available for alkaline and acidic usage environments

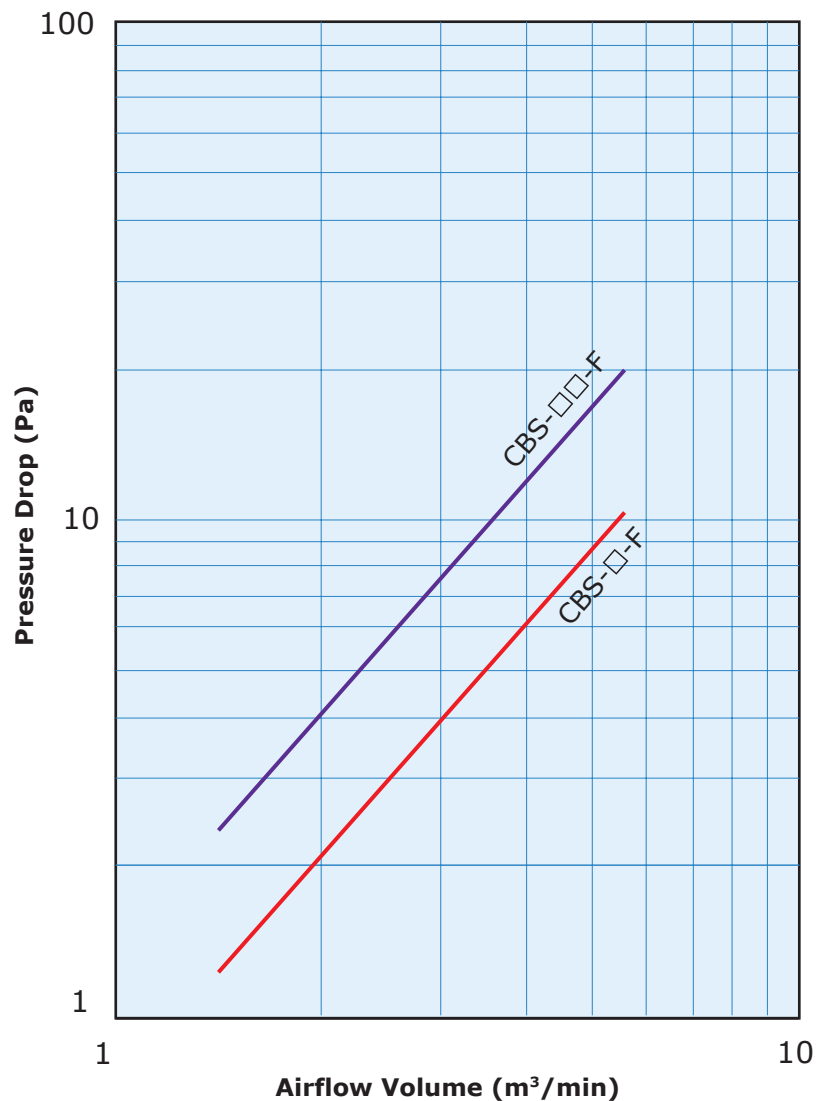
Model

CBS-□□-□

Type

Separator Type

Pressure Drop



Model Designators

CBS - □□ - □

Size Designator

Target Contaminants
Activated Carbon Type

A, AA: Acids

B, BB: Alkalines

C, CC: Organics

Ion Exchange Type

BR, BRBR: Alkalines

ChemArrest Separator
Type Designator

Activated Carbon Long Service Life Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Acidic	CBS-AA-F	56	200	610	610	292	17.4
	CBS-AA-V	26		610	305		9.4
	CBS-AA-H	26		305	610		10.1
	CBS-AA-Q	12		305	305		5.4
Alkaline	CBS-BB-F	56	200	610	610	292	17.5
	CBS-BB-V	26		610	305		9.5
	CBS-BB-H	26		305	610		10.1
	CBS-BB-Q	12		305	305		5.4
Organic	CBS-CC-F	56	200	610	610	292	15.1
	CBS-CC-V	26		610	305		8.4
	CBS-CC-H	26		305	610		9
	CBS-CC-Q	16		305	305		4.9

Ion Exchange Long Service Life Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Alkaline	CBS-BRBR-F	56	200	610	610	292	19.5
	CBS-BRBR-V	26		610	305		10.4
	CBS-BRBR-H	26		305	610		11.1
	CBS-BRBR-Q	12		305	305		5.8

Activated Carbon Low Pressure Drop Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Acidic	CBS-A-F	56	200	610	610	292	13.7
	CBS-A-V	26		305	610		8
	CBS-A-H	26		305	610		8.3
	CBS-A-Q	12		305	305		4.7
Alkaline	CBS-B-F	56	200	610	610	292	13.7
	CBS-B-V	26		610	305		8
	CBS-B-H	26		305	610		8.3
	CBS-B-Q	12		305	305		4.7
Organic	CBS-C-F	56	200	610	610	292	12.2
	CBS-C-V	26		610	305		7.3
	CBS-C-H	26		305	610		7.6
	CBS-C-Q	16		305	305		4.3

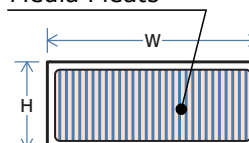
Ion Exchange Low Pressure Drop Type

Target Contaminants	Model	Rated Airflow Volume (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
				Height	Width	Depth	
Alkaline	CBS-BR-F	56	105	610	610	292	15
	CBS-BR-V	26		610	305		8.6
	CBS-BR-H	26		305	610		8.9
	CBS-BR-Q	12		305	305		5

Component Materials

Model		CBS-□□-□	CBS-BR-□
Component Materials	Media	Non-Woven Media+ Granular Activated Carbon	Non-Woven Media+ Ion Exchange Resin
	Frame	Aluminum	
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	
	Sealant	Thermoplastic Resin	
	Gasket	EPDM	

Media Pleats



Available Sizes (mm)

Depth	Max Height	Max Width
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground. Please contact us regarding availability of custom sizes.

GIGA FILTER® Series

ULPA / HEPA Filter / Medium Efficiency Filter

GIGA FILTER SERIES

Product Lineup

Name	GIGA MASTER®	PTFE GIGA®	GLASS GIGA Xtra®	GLASS GIGA®
Abbreviation	GM	GA	GGX	GG
Features	Minimal Organic Compounds/Low Boron	Low Organic Compounds/Boron-Free	Low Organic Compounds/Minimal Boron	Minimal Boron
Organic Compound Generation	1/300	1/50	1/40	1/2
Boron Generation	1/340	n/a	1/340	
Boron Content	1/100	n/a	1/100	

(Comparison to silica tested conventional filters)

- The world's first ultra high-efficiency filter specifically created for the next generation of semiconductor and liquid crystal manufacturing.
- Non-Organic particle testing: All GIGA Filters are factory Silica tested (as opposed to testing by DOP or PAO organics); PSL (Poly Styrene Latex) testing is available by request.

Features

GIGA MASTER FILTER

- In addition to minimal Boron generation, the GIGA MASTER is the world's first filter that can reduce the amount of organic contaminants on wafers to 0.05ng/cm²

PTFE GIGA FILTER

- 99.99999% (7N) Ultra High Efficiency; Low Pressure Drop; Boron-Free

GLASS GIGA Xtra

- Minimal Boron; Reduces amount of organic contaminants on wafers to 0.37ng/cm²

GLASS GIGA

- Media Boron content reduced to 1/100 in comparison with silica tested conventional filters; Boron generation greatly reduced.

Boron Generation

GIGA Filter downstream airborne Boron concentrations have been shown to exhibit far lower amounts compared to standard ULPA Filters. When GIGA Series Filters are employed, cleanroom Boron concentrations may be maintained at less than 10ng/m³.

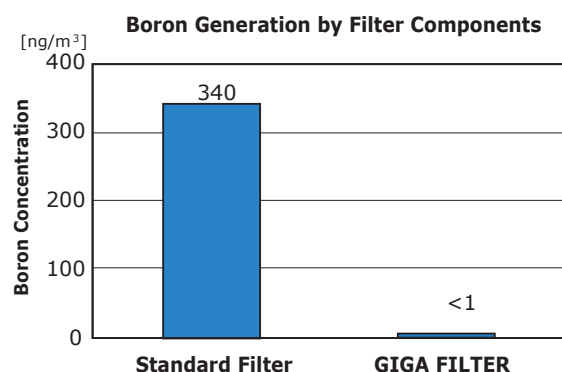


Figure 1

Sampling Conditions:

- Impinger Capture
- Temperature 23-27°C
- Humidity 50-70% RH

Sampling Duration: 24 Hours at 0.4m/s Airflow
(after 24 hour pre-sample run)

Organic Compound Adhesion

The data below shows a comparison of organic adhesion on wafers between a GIGA Master Filter and a conventional ULPA filter. Figure 2 illustrates organic adhesion on exposed wafers through Total Ion Chromatograms (TIC) of the upstreams and downstreams of the tested filters.

Whereas there is a marked increase in organic compounds between the upstream and the downstream flows of conventional silica tested filters, the GIGA MASTER Filter TICs indicate no significant increase.

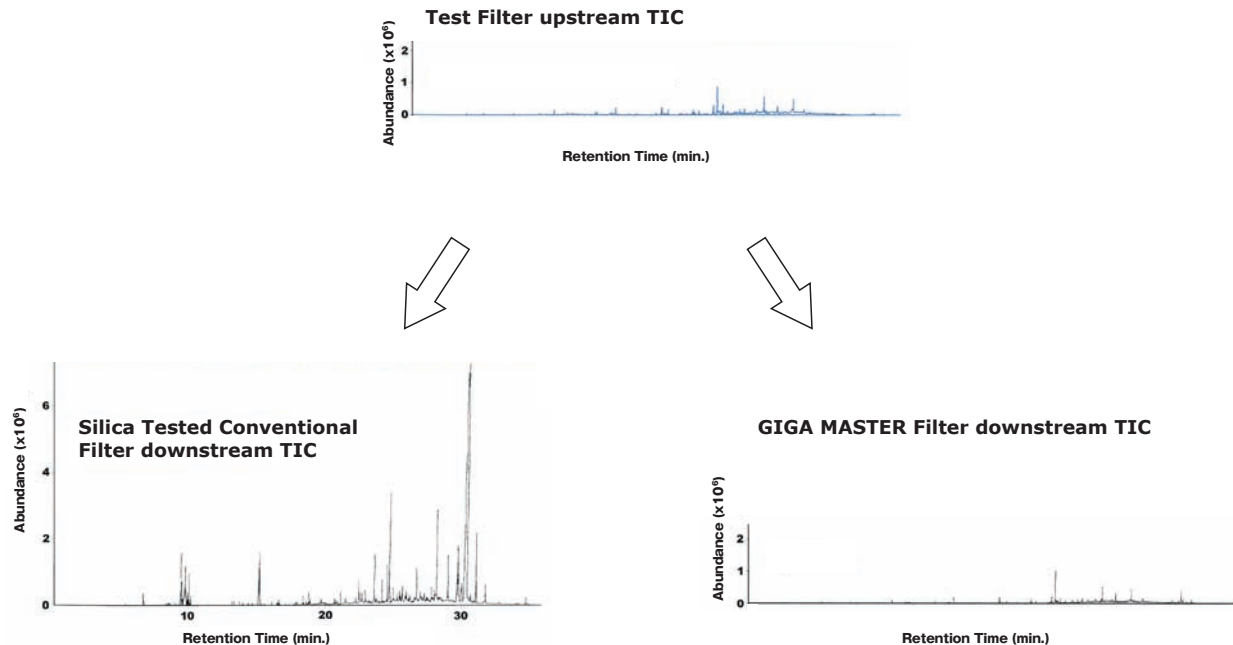


Figure 2

Organic Compound Wafer Contamination

It is known that adhesion of organic compounds on silicon wafer surfaces lowers the pressure resistance of gate oxide films. Figure 3 shows wafer organic adhesion after 24 hours exposure to airflows from each filter. The lowest amount, 0.05 ng/cm² appears downstream of the GIGA MASTER Filter. Downstream concentrations were: PTFE GIGA 0.3 ng/cm², GLASS GIGA Xtra 0.37 ng/cm², GLASS GIGA 7.4 ng/cm², with silica tested conventional filters exhibiting the highest concentrations at 16 ng/cm².

Sampling Duration: 24 Hours at 0.4m/s Airflow (after 24 hour pre-sample run)

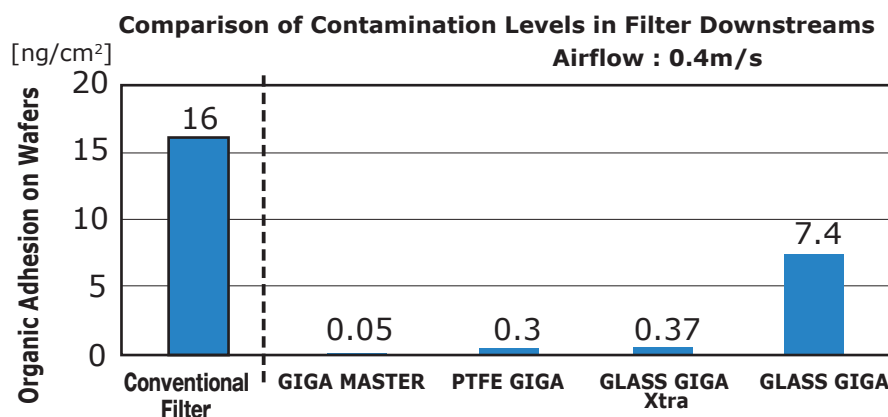
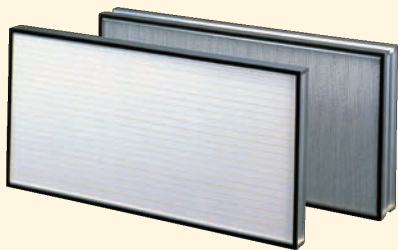
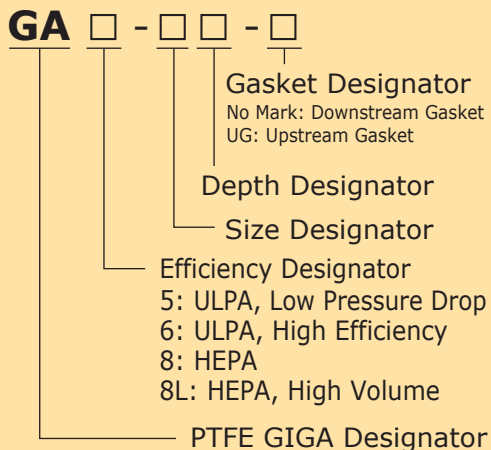
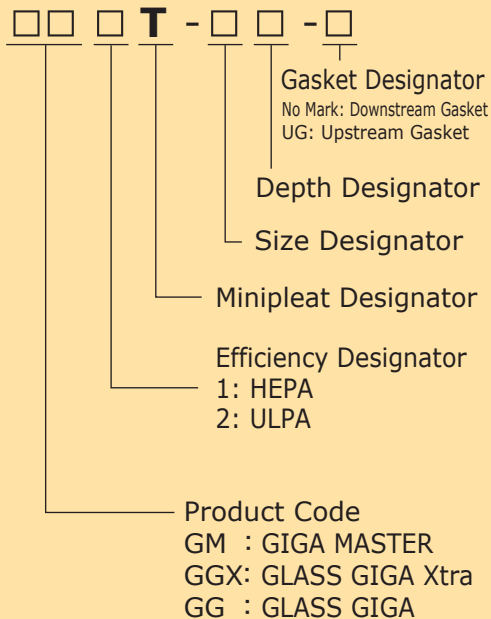


Figure 3



- Light-weight and space-saving
- For ceiling systems (GM/GGX/GG) and manufacturing/fab tools (GA)

Model Designators



GIGA FILTER®

Mini-Pleat ULPA / HEPA Filter

For Ceiling Systems / Manufacturing Equipment

GIGA FILTER

Product Name	GIGA MASTER	PTFE GIGA	GLASS GIGA Xtra	GLASS GIGA
Product Code	GM	GA	GGX	GG
Features	Low Organics/ Low Boron	Low Organics/ Boron-Free	Low Organics/ Low Boron	Low Boron
Organic Compound Generation	1/300	1/50	1/40	1/2
Boron Generation	1/340	—	1/340	
Boron content	1/100	—	1/100	

Silica Scan Tested

Component Materials / Usage Conditions

Product Code		GM	GA
Component Materials	Media	Low Organics / Low Boron Glass Fiber	PTFE Membrane + PET Non-Woven Fiber
	Separator	Thermoplastic Resin	
	Frame	Aluminum	
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	
	Sealant	Urethane Resin	
	Gasket	EPDM	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	50
	Max. Peak Humidity (%RH at No Condensation)	100	

Component Materials / Usage Conditions

Product Code		GGX	GG
Component Materials	Media	Low Organics / Low Boron Glass Fiber	Low Boron Glass Fiber
	Separator	Thermoplastic Resin	
	Frame	Aluminum	
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	
	Sealant	Urethane Resin	
	Gasket	EPDM	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Humidity (%RH at No Condensation)	100	

ULPA Specifications

Model		Rated Airflow (m³/min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (µm)
			Initial Max	Height	Width	Depth			
GM	2T-600F	7	150	610	610	50	2.8	99.9997+ (5N7)	0.1
	2T-600G	10	165			65	3.4		
	2T-600A	10	140			80	3.9		
GA5	-610610T	7	140			25	1.6	99.999+ (5N)	
	-610610E	7	90			35	2.1	99.9999+ (6N)	
	-610610F	7	75			50	2.9		
	-610610G	10	85			65	3.6		
GA6	-610610F	7	100			50	2.9	99.99999+ (7N)	
	-610610G	10	110			65	3.6		
GGX	2T-600F	7	150			50	2.8	99.9997+ (5N7)	
	2T-600G	10	165			65	3.4		
	2T-600A	10	140			80	3.9		
GG	2T-600F	7	150			50	2.9	99.9997+ (5N7)	
	2T-600G	10	155			65	3.5		
	2T-600A	10	130			80	4		

UL Classified GM, GA5 and GA6 Models available.

HEPA Specifications

Model		Rated Airflow (m³/min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (µm)	
			Initial Max	Height	Width	Depth				
GM	1T-600F	10	160	610	610	50	2.8	99.97	0.3	
	1T-600G	10	125			65	3.4	99.99		
	1T-600A	10	105			80	3.9			
GGX	1T-600F	10	160			50	2.8	99.97		99.99
	1T-600G	10	125			65	3.4			
	1T-600A	10	105			80	3.9			
GG	1T-600F	10	150			50	2.9	99.97		99.99
	1T-600G	10	120			65	3.5			
	1T-600A	10	100			80	4			
GA8	-610610E	7	90			35	2.1	99.99		
	-610610F	10	65			50	2.9			
	-610610G	10	55			65	3.6			
GA8L	-610610F	17	115			50	2.9	99.99		
	-610610G	25	150			65	3.6			
GA8LV	-200	56.6	180					292		15.5

UL Classified GA8 Models available.

GM,GGX,GG Available Sizes (mm)

Media Pleats

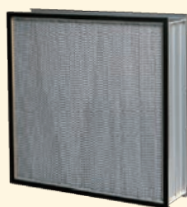
Depth	Max Height	Max Width
50	610	1219
65	610	1219
80	915	1524

GA5,GA6,GA8,GA8L Available Sizes (mm)

Media Pleats

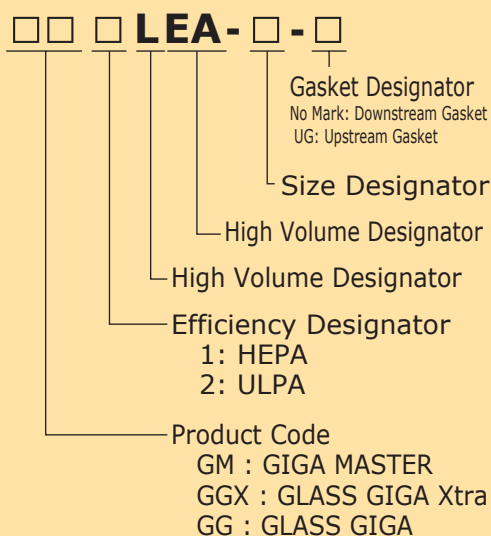
Depth	Max Height	Max Width
25	610	610
35	610	610
50	762	1219
65	762	1524
292	305/610	610

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



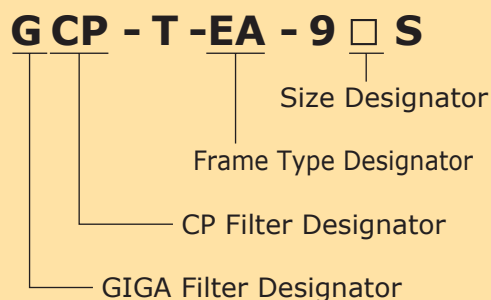
- For recirculation, makeup and ventilation air handling units
- High airflow volume, space saving design

Model Designators



- Boron and Organics generation vastly reduced

Model Designators



GIGA FILTER®

Separator Type ULPA / HEPA / Medium Efficiency Filters

GIGA FILTER

Product Name	GIGA MASTER	GLASS GIGA Xtra	GLASS GIGA
Product Code	GM	GGX	GG
Features	Low Organics/ Low Boron		Low Boron
Organic Compound Generation	1/300	1/40	1/2
Boron Generation	1/340		
Boron content	1/100		
Silica Scan Tested			

Component Materials / Usage Conditions

Product Code		GM	GGX	GG
Component Materials	Media	Low Organics / Low Boron Glass Fiber		
	Separator	Aluminum		
	Frame	Aluminum		
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating		
	Sealant	Urethane Resin		
Usage Conditions	Gasket	EPDM		
	Max. Continuous Usage Temperature (°C)	60		
	Max. Peak Humidity (%RH at No Condensation)	100		

Separator Type Medium Efficiency Filter For AHU and Intake Air Treatment

GIGA CP FILTER

Model	GCP-T-EA-9 □ S
Test Method	JIS B 9908:2011 Type 2
Average Efficiency	80%+ at 0.4μm / 90%+ at 0.7μm

Component Materials / Usage Conditions

Product Code		GCP
Component Materials	Media	Low Organics / Low Boron Non-Woven Fiber
	Separator	Aluminum
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
Usage Conditions	Gasket	EPDM
	Max. Continuous Usage Temperature (°C)	43
	Max. Peak Humidity (%RH at No Condensation)	100

ULPA / HEPA Filter Specifications

Model		Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (μm)
			Initial Max	Final	Height	Width	Depth			
GM	1EA-450	15	250	500	610	305	292	6.9	99.97+	0.3
	1EA-305610C	14			305	610		7.7		
	1EA-1000	32			610	610		11.5		
GGX	1EA-450	15			610	305		6.9		
	1EA-305610C	14			305	610		7.7		
	1EA-1000	32			610	610		11.5		
GG	1EA-450	15			610	305		7.0		
	1EA-305610C	14			305	610		7.8		
	1EA-1000	32			610	610		11.7		
GM	2EA-450	13	250	500	610	305	292	7.5	99.9997+ (5N7)	0.1
	2EA-305610C	12			305	610		8.3		
	2EA-1000	28			610	610		12.7		
GGX	2EA-450	13			610	305		7.5		
	2EA-305610C	12			305	610		8.3		
	2EA-1000	28			610	610		12.7		
GG	2EA-450	13			610	305		7.5		
	2EA-305610C	12			305	610		8.4		
	2EA-1000	28			610	610		12.9		

UL Classified GM and GG Models available.

High Airflow Volume HEPA Filter Specifications

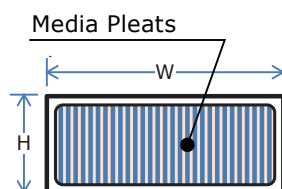
Model		Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (µm)
			Initial Max	Final	Height	Width	Depth			
GM	1LEA-75	22	285	500	610	305	292	7.3	99.97+	0.3
	1LEA-305610C	22			305	610		8.1		
	1LEA-180	50			610	610		12.3		
GGX	1LEA-75	22			610	305		7.3		
	1LEA-305610C	22			305	610		8.1		
	1LEA-180	50			610	610		12.3		
GG	1LEA-75	22	275	610	305	7.4				
	1LEA-305610C	22		305	610	8.2				
	1LEA-180	50		610	610	12.6				

UL Classified GM and GG Models available.

Filter

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ²	0.7μm ²	
GCP-T-EA-9AS	56	150	343	610	610	292	80+	90+	11.6
GCP-T-EA-9CS	28			610	305				6.9
GCP-T-EA-9-305610CS	25			305	610				7.8

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm



Available Sizes (mm)

Depth	Max Height	Max Width
292	610	915

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



PTFE FILTER

ULPA / HEPA Filter

For Corrosive Gas Environments

PTFE FILTER

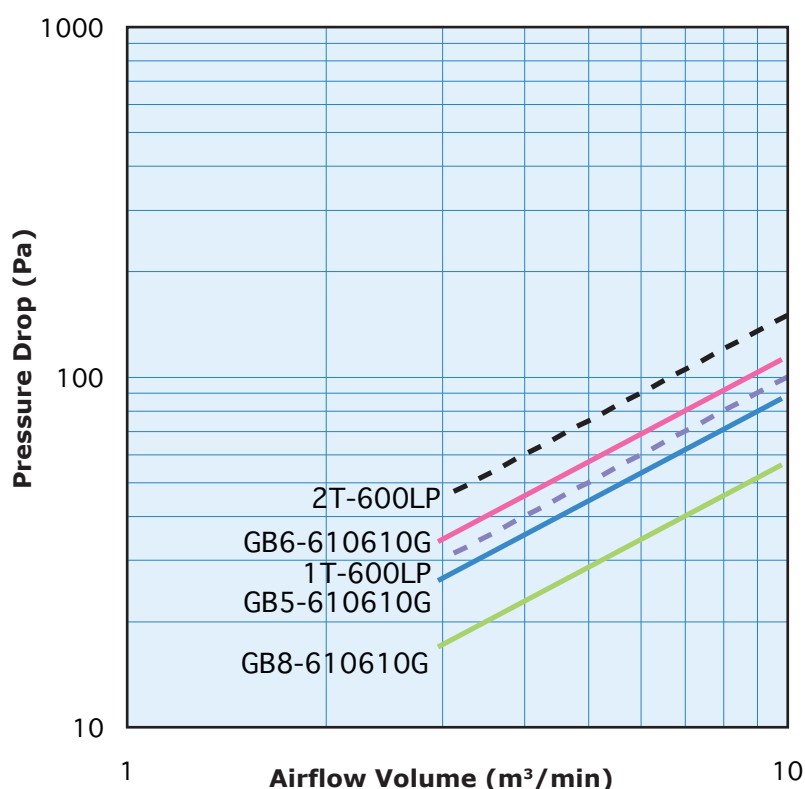
Model

GB□-□□□-□

Silica Scan Tested

- Optimal for environments with cleaning tools employing hydrofluoric acid
- Unlike conventional glass fiber media, no boron is generated by hydrofluoric acid reacting with filter media

Comparison of PTFE and Glass Fiber Filter Maximum Initial Pressure Drop



Model Designators

GB □ - □ □ □ - □

Gasket Designator
No Mark:
Downstream Gasket
UG: Upstream Gasket

Depth Designator
Size Designator

Efficiency Designator
5: ULPA, Low Pressure Drop
6: ULPA, High Efficiency
8: HEPA

PVC Frame PTFE
Minipleat Designator

Component Materials / Usage Conditions

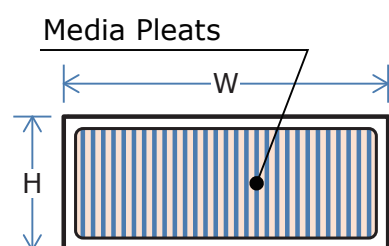
Model		GB□-□□□-□
Component Materials	Media	PTFE Membrane + PET Non-Woven Fiber
	Separator	Thermoplastic Resin
	Frame	PVC
	Sealant	Urethane Resin
	Gasket	EPDM
Usage Conditions	Max. Continuous Usage Temperature (°C)	50
	Max. Peak Humidity (%RH at No Condensation)	100

ULPA Filter Specifications

Model		Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (μm)
			Initial Max	Height	Width	Depth			
GB5	-305305E	1.5	90	305	305	35	1.4	99.9999+ (6N)	0.1
	-610305E	3.2		610	305		2.2		
	-610610E	6.9		610	610		3.3		
	-305305F	1.5	75	305	305	50	2.0		
	-610305F	3.2		610	305		3.1		
	-610610F	6.9		610	610		4.6		
	-6101219F	14.2		610	1219		7.7		
	-305305G	2.1	85	305	305	65	2.6		
	-610305G	4.6		610	305		4.1		
	-610610G	9.8		610	610		6.0		
	-6101219G	20.3		610	1219		10.3		
GB6	-305305F	1.5	100	305	305	50	2.0	99.99999+ (7N)	0.1
	-610305F	3.2		610	305		3.1		
	-610610F	6.9		610	610		4.6		
	-6101219F	14.2		610	1219		7.7		
	-305305G	2.1	110	305	305	65	2.6		
	-610305G	4.6		610	305		4.1		
	-610610G	9.8		610	610		6.0		
	-6101219G	20.3		610	1219		10.3		

ULPA / HEPA Filter Specifications

Model		Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)	Arrestance Efficiency (%)	Target Particle Diameter (μm)
			Initial Max	Height	Width	Depth			
GB8	-305305E	2.1	90	305	305	35	1.4	99.99+ (4N)	0.3
	-610305E	4.6		610	305		2.2		
	-610610E	9.8		610	610		3.3		
	-305305F	2.1	65	305	305	50	2.0		
	-610305F	4.6		610	305		3.1		
	-610610F	9.8		610	610		4.6		
	-6101219F	20.3		610	1219		7.7		
	-305305G	2.1	55	305	305	65	2.6		
	-610305G	4.6		610	305		4.1		
	-610610G	9.8		610	610		6.0		
	-6101219G	20.3		610	1219		10.3		



Available Sizes (mm)

Depth	Max Height	Max Width
35	610	610
50	610	1219
65	762	1219

For horizontal airflows, install filters with pleats perpendicular to the ground. Please contact us regarding availability of custom sizes.

High Temperature Filter Selection Guide

Cambridge High Temperature Filters may contain either ceramic or silicone sealant. As silicone sealant filters may release silicone gas during usage, for sterilization, filling, film coating and other similar processes, ceramic sealant filters are recommended.

HEPA / Sub-HEPA Filters

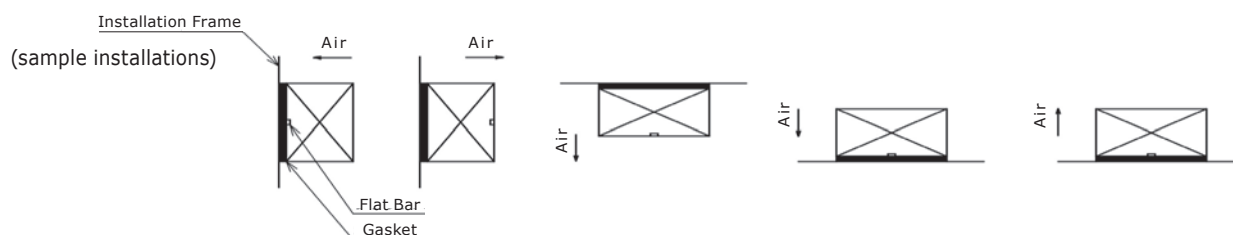
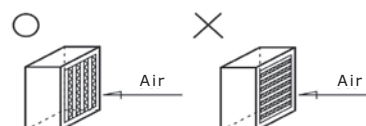
Max. Continuous Usage Temperature (°C)	Sealant Gasket Frame	Ceramic		Silicone	
		Glass Fiber		Silicone Sponge	
		Stainless Steel	Steel Plate	Stainless Steel	Steel Plate
150		—	FE	—	EEKT
180		FU	—	EUKT	—
220				EUK	—
230				—	—
350		HT	—	—	—
450		XT	—	—	—

Medium Efficiency Filters

Max. Continuous Usage Temperature (°C)	Sealant Gasket Frame	Ceramic		Silicone	
		Glass Fiber		Silicone Sponge	
		Stainless Steel	Steel Plate	Stainless Steel	Steel Plate
150		FU	FE	EUKT	EEKT
250		HT	—	—	—

Filter Installation

1. When the air flow is horizontal, always position filters with the pleats vertical. NEVER position the filter with the pleats horizontal, as this will damage the media.
2. Each filter is labeled to indicate airflow direction. Please confirm that the gasket is located on the correct side.



3. Once the filter is installed, ensure that air flow is uniform and perpendicular to the filtration surface. Uneven or concentrated air flows may cause damage to the filtration media.

High Temperature Filter Characteristics

1. Initial Use

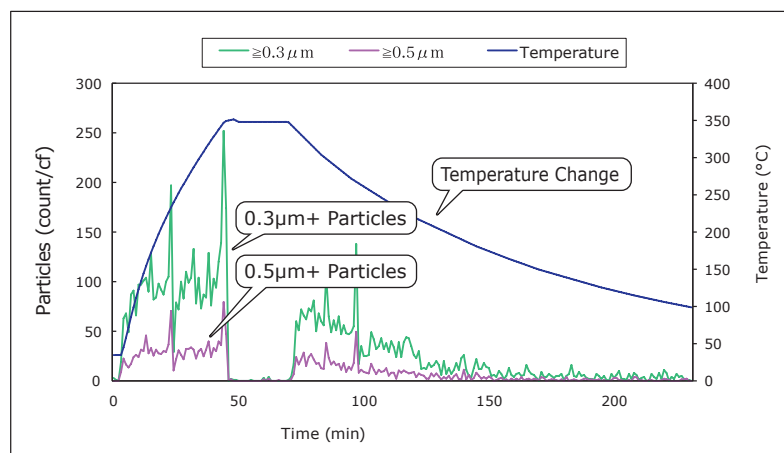
Glass fibers in the filtration media fibers contain small amounts of fluoride desiccants and acrylates to provide strength and moisture repellency, which upon increase in temperature may briefly begin to break down, burn, smoke and/or generate odors and particles.

Smoke, odor and particle emission can be controlled in a process known as pre-baking by raising the temperature of filters to above normal operating temperature prior to installation and use. However, as pre-baked filters may continue to smoke and emit odors and particles, further heat treatment at 20°C above normal operating temperature is recommended.

2. Particle Generation During Temperature Fluctuation

Temperature increases and decreases may cause particle generation in the filter's downstream. However, this can be moderated by limiting the change in through-flow air temperature to within $\pm 1^\circ\text{C}/\text{min}$.

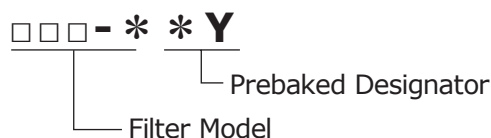
Temperature Fluctuation Particle Generation

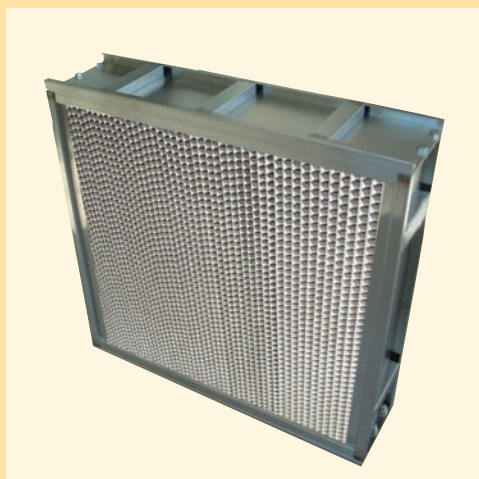


Particle generation during temperature fluctuation is influenced by equipment and filter characteristics, temperature gradients and other conditions. The above graph shows internal testing results and is not intended as a guarantee of filter performance.

3. Pre-Shipment Pre-baking

Pre-shipment factory pre-baking at 150, 200, 250 or 370°C is available upon request. The suffix "-Y" is assigned to the model number of filters that have undergone the prebaking process.

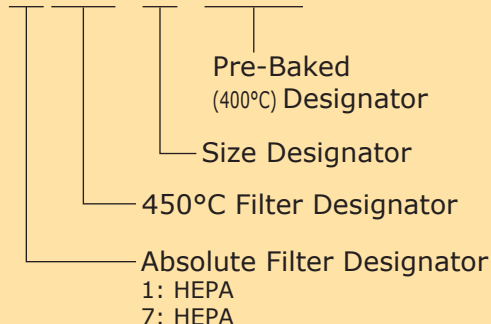




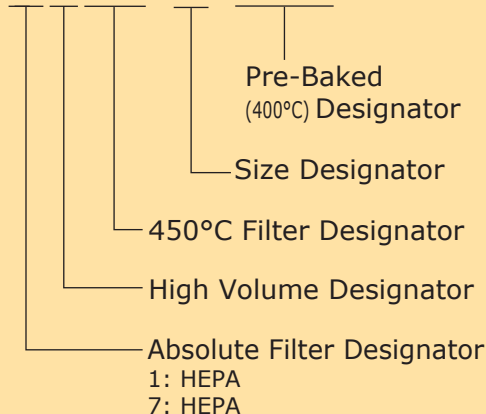
- Applications include high temperature drying and sterilization processes
- Max. Continuous Usage Temperature 450°C
- Constructed with high temperature oxidation-resistant components
- Minimal particle generation during temperature fluctuation
- Low-Boron models available

Model Designators

□ XT - □ - 40Y



□ LXT - □ - 40Y



Ultra High Temperature 450°C Absolute Filter Separator Type HEPA / Sub-HEPA

ABSOLUTE FILTER ULTRA HIGH TEMP

HEPA Filter

Model	1XT-□-40Y	1LXT-□-40Y
	Standard Type	High Volume Type
Test Standard	0.3µm	
Efficiency	99.97%+ (at normal temperature)	

Sub-HEPA

Model	7XT-□-40Y	7LXT-□-40Y
	Standard Type	High Volume Type
Test Standard	0.3µm	
Efficiency	95%+ (at normal temperature)	

Component Materials / Usage Conditions

Model		□XT-□-40Y / □LXT-□-40Y
Component Materials	Media	Glass Fiber
	Separator	Stainless Steel
	Frame	Stainless Steel
	Sealant	Ceramic + Ceramic Fiber
	Gasket	Glass Fiber
Usage Conditions	Max. Continuous Usage Temperature (°C)	450
	Max. Peak Temperature (°C)	500
	Max. Peak Humidity (%RH at No Condensation)	100

HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1XT-600-40Y	18	250	500	610	610	150	13.7
1XT-830-40Y	22			610	762		16.5
1XT-980-40Y	26			610	915		19.2
1XT-1000-40Y	32			610	610	292	25.6
1XT-1250-40Y	40			610	762		30.8

High Airflow Volume HEPA Filter Specifications

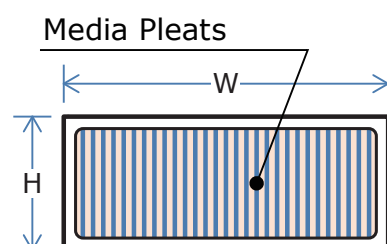
Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1LXT-100-40Y	28	250	500	610	610	150	14.2
1LXT-130-40Y	36			610	762		17.1
1LXT-150-40Y	42			610	915		19.9
1LXT-180-SCM-40Y	42.5	270		610	610	292	26.4

Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7XT-600-40Y	18	125	250	610	610	150	13.7
7XT-830-40Y	22			610	762		16.5
7XT-980-40Y	26			610	915		19.2
7XT-1000-40Y	32			610	610	292	25.6
7XT-1250-40Y	40			610	762		30.8

High Airflow Volume Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7LXT-100-40Y	28	140	250	610	610	150	14.2
7LXT-130-40Y	36			610	762		17.1
7LXT-150-40Y	42			610	915		19.9
7LXT-180-SCM-40Y	42.5	185		610	610	292	26.4



Available Sizes (mm)

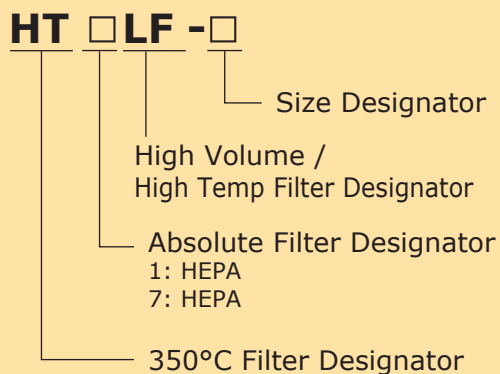
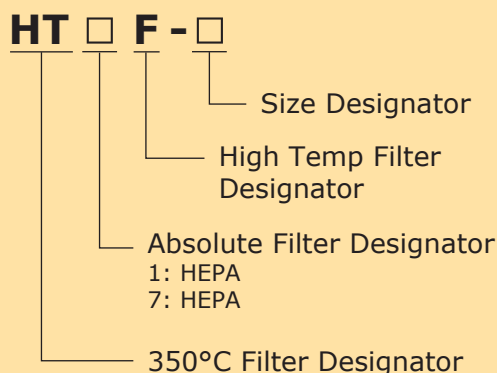
Depth	Max Height	Max Width
150	610	915
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Applications include high temperature drying, sterilization and pharmaceutical manufacturing processes
- Max. Continuous Usage Temperature 350°C
- Minimal particle generation during temperature fluctuation
- High airflow and low Boron models available

Model Designators



Super High Temperature 350°C Absolute Filter Separator Type HEPA / Sub-HEPA

ABSOLUTE FILTER SUPER HIGH TEMP

HEPA Filter

Model	HT1F-□	HT1LF-□
	Standard Type	High Volume Type
Test Standard	0.3μm	
Efficiency	99.97%+ (at normal temperature)	

Sub-HEPA

Model	HT7F-□	HT7LF-□
	Standard Type	High Volume Type
Test Standard	0.3μm	
Efficiency	95%+ (at normal temperature)	

Component Materials / Usage Conditions

Model		HT1F-□ HT1LF-□	HT7F-□ HT7LF-□
Component Materials	Media	Glass Fiber	
	Separator	Stainless Steel	
	Frame	Stainless Steel	
	Sealant	Ceramic + Ceramic Fiber	Glass Fiber + Ceramic Fiber
	Gasket	Glass Fiber	
Usage Conditions	Max. Continuous Usage Temperature (°C)	350	
	Max. Peak Temperature (°C)	400	
	Max. Peak Humidity (%RH at No Condensation)	100	

HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT1F-600	18	250	500	610	610	150	13.7
HT1F-830	22			610	762		16.5
HT1F-980	26			610	915		19.2
HT1F-1000	32			610	610	292	25.6
HT1F-1250	40			610	762		30.8

High Airflow Volume HEPA Filter Specifications

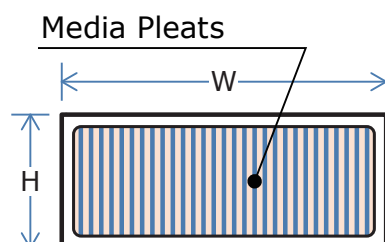
Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT1LF-100	28	250	500	610	610	150	14.2
HT1LF-130	36			610	762		17.1
HT1LF-150	42			610	915		19.9
HT1LF-180-SCM	42.5	270		610	610	292	26.4

Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT7F-600	18	125	250	610	610	150	13.7
HT7F-830	22			610	762		16.5
HT7F-980	26			610	915		19.2
HT7F-1000	32			610	610	292	25.6
HT7F-1250	40			610	762		30.8

High Airflow Volume Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT7LF-100	28	140	250	610	610	150	14.2
HT7LF-130	36			610	762		17.1
HT7LF-150	42			610	915		19.9
HT7LF-180-SCM	42.5	185		610	610	292	26.4



Available Sizes (mm)

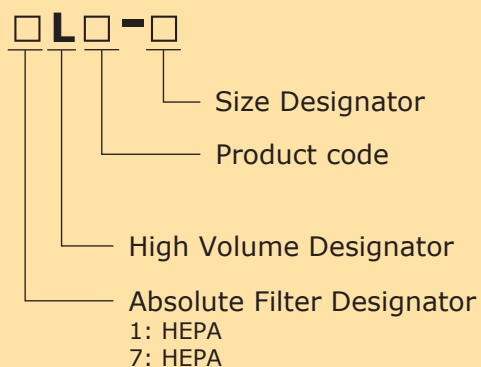
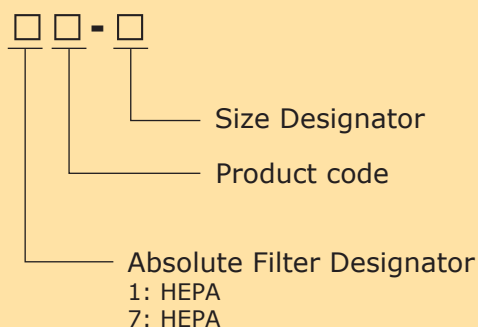
Depth	Max Height	Max Width
150	610	915
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Applications include high temperature drying and sterilization processes
- Prebaking available

Model Designators



High Temperature 150~230°C Absolute Filter Separator Type HEPA / Sub-HEPA

ABSOLUTE FILTER HIGH TEMP

Model	1□-□	1L□-□
	Standard Type	High Volume Type
Test Standard	0.3μm	
Efficiency	99.97%+ (at normal temperature)	

Model	7□-□	7L□-□
	Standard Type	High Volume Type
Test Standard	0.3μm	
Efficiency	95%+ (at normal temperature)	

Component Materials / Usage Conditions

Model		□FU-□ □LFU-□	□FE-□ □LFE-□
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Stainless Steel	Steel Plate
	Frame Finish	—	Chrome-Plating
	Sealant	Ceramic + Ceramic Fiber	
	Gasket	Glass Fiber	
Usage Conditions	Max. Continuous Usage Temperature (°C)	230	150
	Max. Peak Temperature (°C)	250	170
	Max. Peak Humidity (%RH at No Condensation)	100	

Model		□EUK-□ □LEUK-□	□EUKT-□ □LEUKT-□	□EEKT-□ □LEEKT-□
Component Materials	Media	Glass Fiber		
	Separator	Aluminum		
	Frame	Stainless Steel		Steel Plate
	Frame Finish	—		Chrome-Plating
	Sealant	Silicone		
	Gasket	Silicone		
Usage Conditions	Max. Continuous Usage Temperature (°C)	220	180	150
	Max. Peak Temperature (°C)	240	200	170
	Max. Peak Humidity (%RH at No Condensation)	100		

HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1□-600	18	249	498	610	610	150	9.9
1□-830	22			610	762		11.7
1□-980	26			610	915		13.4
1□-1000	32			610	610	292	17.9
1□-1250	40			610	762		21.2

High Airflow Volume HEPA Filter Specifications

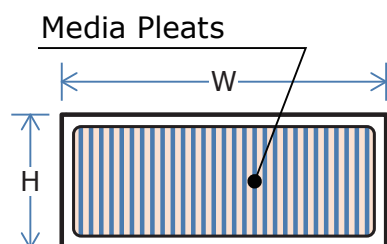
Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1L□-100	28	249	498	610	610	150	10.0
1L□-130	36			610	762		11.8
1L□-150	42			610	915		13.6
1L□-180	50			610	610	292	18.2

Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7□-600	18	123	245	610	610	150	9.9
7□-830	22			610	762		11.7
7□-980	26			610	915		13.4
7□-1000	32			610	610	292	17.9
7□-1250	40			610	762		21.2

High Airflow Volume Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
7L□-100	28	137	275	610	610	150	10.0
7L□-130	36			610	762		11.8
7L□-150	42			610	915		13.6
7L□-180	42.5	177	355	610	610	292	18.2



Available Sizes (mm)

Depth	Max Height	Max Width
150	610	915
292	610	762

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- 100mm depth slim design
- 35% lighter than separator type models
- Minimal particle generation during temperature fluctuation
- Applications include high temperature drying and sterilization processes
- Protective face guard

Model Designators

HT □ TF- □ M-37Y

370°C
Prebaked
Designator

100mm Depth
Designator

Size Designator

High Temp Thinfil
Designator

Absolute Filter Designator
1: HEPA
7: HEPA

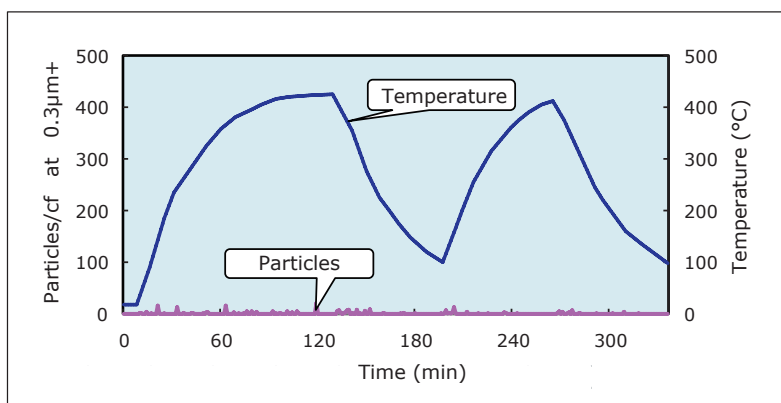
350°C Filter Designator

High Temperature 350°C Absolute Filter Minipleat HEPA / Sub-HEPA

ABSOLUTE FILTER SUPER HIGH TEMP

Model	HT1TF-□M-37Y	HT7TF-□M-37Y
	HEPA	Sub-HEPA
Test Standard	0.3μm	
Efficiency	99.97%+ (at normal temperature)	95%+ (at normal temperature)

Temperature Fluctuation Particle Generation



Particle generation during temperature fluctuation is influenced by equipment and filter characteristics, temperature gradients and other conditions. The above graph shows internal testing results and is not intended as a guarantee of filter performance.

Component Materials / Usage Conditions

Model		HT□TF-□M-37Y
Component Materials	Media	Glass Fiber
	Separator	Glass Fiber
	Frame	Stainless Steel
	Frame Finish	Stainless Steel
	Sealant	Ceramic
	Gasket	Glass Fiber
Usage Conditions	Max. Continuous Usage Temperature (°C)	350
	Max. Peak Temperature (°C)	400
	Max. Peak Humidity (%RH at No Condensation)	100

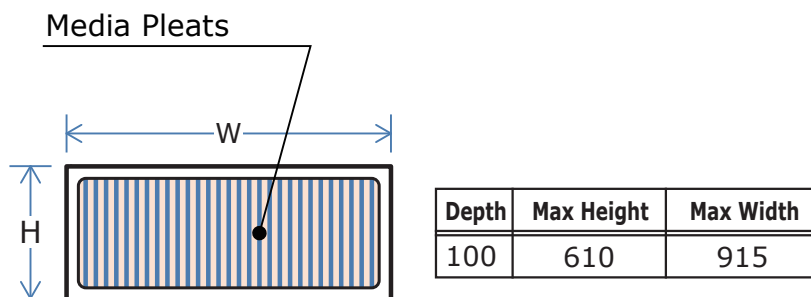
HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT1TF-305305M-37Y	4.5	250	400	305	305	100	3.5
HT1TF-610305M-37Y	9			610	305		6
HT1TF-610610M-37Y	21			610	610		9.5
HT1TF-610762M-37Y	26			610	762		11

Sub-HEPA Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
HT7TF-305305M-37Y	6	250	350	305	305	100	3.5
HT7TF-610305M-37Y	14			610	305		6
HT7TF-610610M-37Y	31			610	610		9.5
HT7TF-610762M-37Y	39			610	762		11

Available Sizes (mm)



For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Applications include high temperature drying and sterilization processes
- Prebaking available

High Temperature 150~250°C CP Filter

Separator Type Medium / High Efficiency Filter

CP FILTER HIGH TEMP

Model	CP-□-9□S
Test Standard	JIS B 9908:2011 Type 2
Efficiency	80%+ at 0.4μm / 90%+ at 0.7μm

Component Materials / Usage Conditions

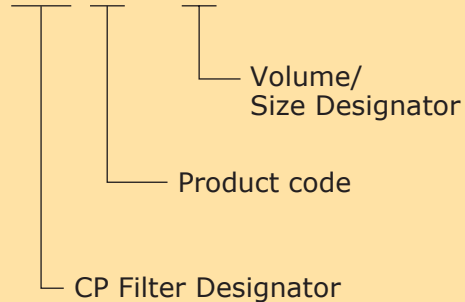
Model		FU	FE
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Stainless Steel	Steel Plate
	Frame Finish	—	Chrome-Plating
	Sealant	Ceramic + Ceramic Fiber	
	Gasket	Glass Fiber	
Usage Conditions	Max. Continuous Usage Temperature (°C)	150	
	Max. Peak Temperature (°C)	170	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model		EUKT	EEKT
	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Stainless Steel	Steel Plate
	Frame Finish	—	Chrome-Plating
	Sealant	Silicone	
	Gasket	Silicone	
	Max. Continuous Usage Temperature (°C)	150	
	Max. Peak Temperature (°C)	170	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model		HT
	Media	Glass Fiber
	Separator	Aluminum
	Frame	Stainless Steel
	Sealant	Glass Fiber + Ceramic Fiber
	Gasket	Glass Fiber
	Max. Continuous Usage Temperature (°C)	250
	Max. Peak Temperature (°C)	270
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

CP-□-9□S



FU, FE, EUKT, EEKT CP Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²	
CP-□-9AS	56	177	343	610	610	292	80+	90+	17.3
CP-□-9BS	28	88	245	610		150			9.6
CP-□-9CS	28	177	343	610	305	292			11.1
CP-□-9DS	14	88	245	610		150			6.2

1. Geometric Average of 0.3~0.5μm

2. Geometric Average of 0.5~1.0μm

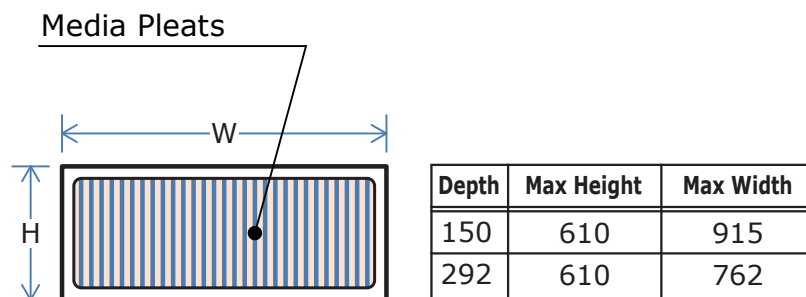
CP-HT Filter Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Arrestance Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²	
CP-HT-9AS	56	177	343	610	610	292	80+	90+	25
CP-HT-9BS	28	88	245	610		150			13
CP-HT-9CS	28	177	343	610	305	292			15
CP-HT-9DS	14	88	245	610		150			8

1. Geometric Average of 0.3~0.5μm

2. Geometric Average of 0.5~1.0μm

Available Sizes (mm)



For horizontal airflows, install filters with pleats perpendicular to the ground.

Enzymic Microbial Inhibition Filter Series

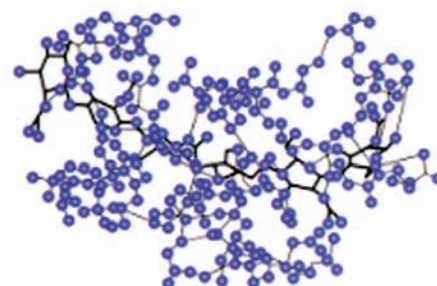
Medium / High Efficiency Filter

PACMAN

Classification Model	Medium / High Efficiency Filter		HEPA Filter	
	Mini-Pleat Type	Separator Type	Mini-Pleat Type	Separator Type
Model Series	N2-9T-□G	N2-CP-□-EA	N1-1T-□□	N1-1□-□ N1-1L□-□
Test Method	JIS B 9908 Light Scattering Integration		0.3am Test	
Efficiency	80% at 0.4μm / 90% at 0.7μm		99.97%+ / 99.99%+	

Features

- Quick and effective
- Functions at room temperature: No electricity or heating required
- Enzymes molecularly bonded to glass fiber media: No enzymes released by physical impact
- Natural enzymes: Safe for the environment and human beings



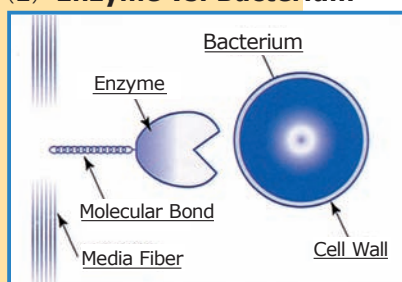
Enzyme Molecular Structure

Enzymic Sterilization Mechanism

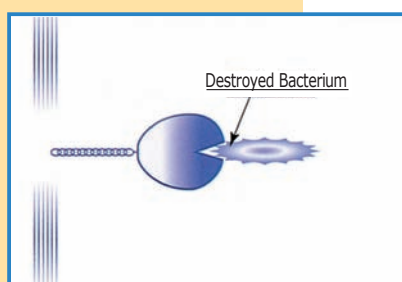
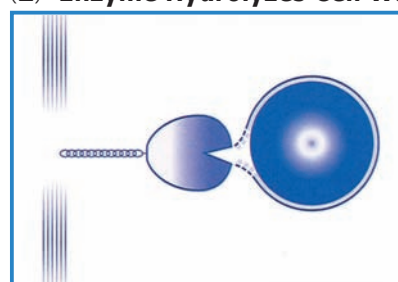
Enzymic Filters employ modified lysozymes with an extensive sterilization spectrum, thus providing sterilization reliability over a wide range of bacteria.

In the Enzymic Filter's sterilization process, enzymes fixed on media fibers hydrolyze and break the molecular bonds of bacterial cell walls (glycoside, amido, or peptide). Cell membranes are then ruptured by inner osmotic pressure and the bacteria are destroyed

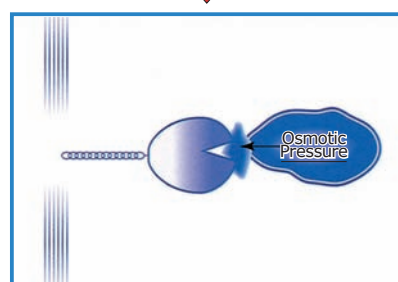
(1) Enzyme vs. Bacterium



(2) Enzyme Hydrolyzes Cell Wall



(4) Destruction of Bacterium

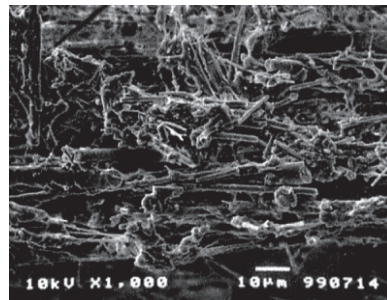


(3) Rupture by Inner Osmotic Pressure

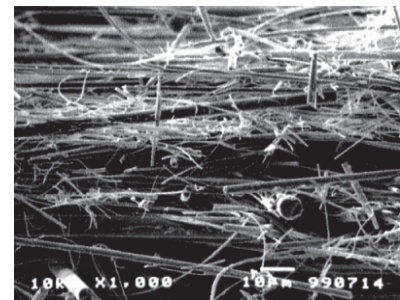
Secondary Contamination Prevention

Particles collected on the exposed upstream surface of the filter may accumulate to a thickness of 1/3 of one layer of filter media.

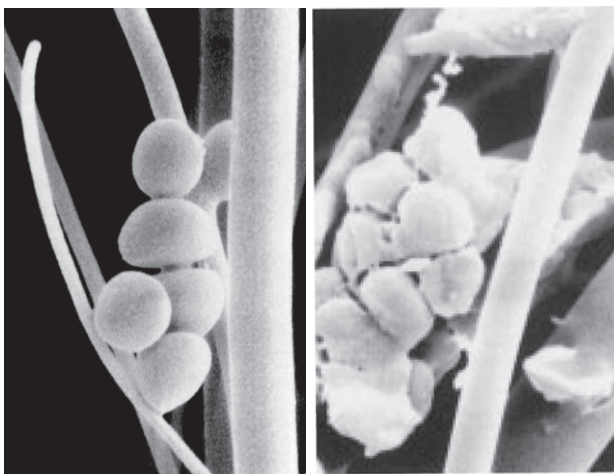
Analysis of a conventional HEPA filter used for one year by a food manufacturer showed particle accumulation of 0.1 mm thickness on a cross-section of upstream filter media (thickness: 0.33 mm) and further detected Gram-Positive, and other bacteria proliferation within the particles. Also, secondary scattered Gram-positive and other bacteria were detected on sections of the filter that appeared to be clean: within 0.1 mm of the downstream face where there was no particle adhesion. This indicates the existence of bacteria proliferation and scattering throughout the filter.



Media Cross-section
(upstream inlet)



Media Cross-section
(downstream outlet)



Staphylococcus aureus ATCC700698

This type of secondary contamination can be prevented through the use of Cambridge Enzymic Filters. The Enzymic Filter collects and neutralizes bacteria as they move through the filter towards the downstream face. Lytic enzymes are evenly deposited throughout the filtration media by molecular bonds, thus providing efficient microorganism sterilization and reliably preventing secondary contamination.

MRSA

Methicillin Resistant Staphylococcus Aureus can cause skin infections, pneumonia and food poisoning. MRSA is a known cause of staph infections which can occur in medical facilities.

Fungus Inhibition

It is known that fungus contamination which may occur during food product, pharmaceutical and cosmetic manufacturing processes, can cause infections and lead to the development of skin lesions. In addition, contamination can lead to allergic diseases, such as asthma, allergic rhinitis and atopic dermatitis caused by fungus and fungivorous parasites.

If oxygen and nutrition sources, temperature, humidity, and time permit, fungi can produce hyphae, then implant a large number of spores on media causing secondary contamination.

A conventional HEPA filter used for one year by a leading food manufacturer was removed and the filter media near the outlet was sampled. The media cross sections were analyzed by electron microscope. The above photograph shows the crucial moment when green mold spores grew hyphae, and implanted a large number of new spores onto the filter media.

The Cambridge Enzymic Filter inhibits the growth of hyphae through bacteriostasis, and thus substantially prevents the growth of fungus on filter media.



Fungus Build-Up on Conventional Filter

Microbial Inhibition Enzymic Filter

Mini-Pleat HEPA Filter

ENZYMIC FILTER

Model	N1-1T-□□	
Test Standard	0.3μm	
Efficiency	99.97%+	99.99%+
	—	Scan Tested

Standard Specifications

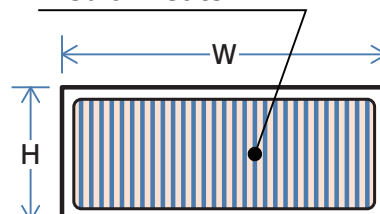
Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial	Max	Height	Width	Depth	
N1-1T-320	4.7	147 (167)			305	50	1.6
N1-1T-600	10.0				610		2.6
N1-1T-830	12.7				762		3.1
N1-1T-980	15.3				915		3.6
N1-1T-320LP	4.7	98 (118)			305	65	2
N1-1T-600LP	10.0				610		3.3
N1-1T-830LP	12.7				762		4
N1-1T-980LP	15.3				915		4.6
N1-1T-320A	4.7	88 (88)			305	80	2.2
N1-1T-600A	10.0				610		3.7
N1-1T-830A	12.7				762		4.5
N1-1T-980A	15.3				915		5.3

Pressure drop values in (): Scan-Tested Models.

Component Materials / Usage Conditions

Model		N1-1T-□□
Component Materials	Media	Enzyme Embedded Glass Fiber
	Separator	Thermoplastic Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	90

Media Pleats



Available Sizes (mm)

Depth	Max Height	Max Width
50	610	1219
65	762	1219
80	762	1524

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Minipleat HEPA Enzymic Filter
- Lightweight, Low Profile Design

Model Designators

N1 - 1T - □ □

Depth Designator
No Mark: 50mm
LP: 65mm
A: 80mm

Size Designator

Minipleat Designator

Absolute Filter Designator

Enzymic Filter Designator

Scan Tested Models

N1-1T-600S
N1-1T-600SLP
N1-1T-600AS

Microbial Inhibition Enzymic Filter Separator Type HEPA

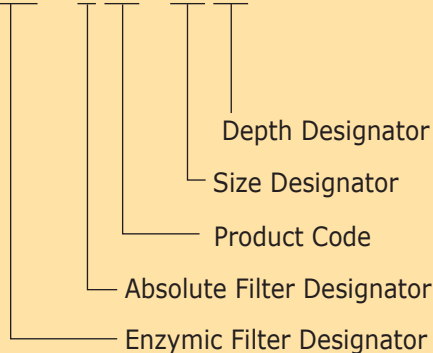
ENZYMIC FILTER

Model	N1-1□-□□		N1-1L□-□□	
	Standard Type		High Volume Type	
Test Standard	0.3μm			
Efficiency	99.97%+	99.99%+	99.97%+	99.99%+
	—	Scan Tested	—	Scan Tested

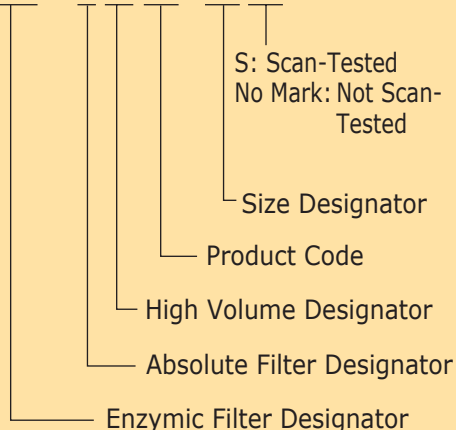
- Separator Type HEPA Enzymic Filter
- Lightweight, Low Profile Design

型式表現

N1-1□-□□



N1-1L□-□□



Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial	Max	Final	Height	Width	Depth
N1-1□-50	1.5	249	498	150	203	203	1.2
N1-1□-110	3.9				305	305	2
N1-1□-600	18				610	610	5.2
N1-1□-830	22				610	762	6.2
N1-1□-200	6.4			292	305	305	4.3
N1-1□-450	15				610	305	6.7
N1-1□-1000	32				610	610	11.1

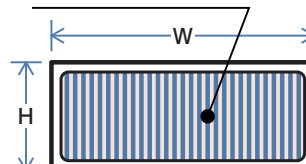
Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial	Max	Final	Height	Width	Depth
N1-1L□-20	6	249	498	150	305	305	2.3
N1-1L□-40	12				610	305	3.7
N1-1L□-100	28				610	610	6.3
N1-1L□-130	36				610	762	7.5
N1-1L□-35	9			292	305	305	4.6
N1-1L□-75	20				610	305	7.4
N1-1L□-180	42.5				610	610	12.7

Component Materials / Usage Conditions

Model		EA	EU	D
Component Materials	Media	Enzyme Embedded Glass Fiber		
	Separator	Aluminum		
	Frame	Aluminum	Stainless Steel	Plywood
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating	—	
	Sealant	Urethane Resin		
	Gasket	Chloroprene		
Usage Conditions	Max. Continuous Usage Temperature (°C)	60		
	Max. Peak Humidity (%RH at No Condensation)	90		

Media Pleats



Available Sizes (mm)

Depth	Max Height	Max Width
150	762	1219
292	610	915

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Minipleat Medium/High Efficiency Enzymic Filter
- Optimal for intake air treatment in hospitals, and pharmaceutical and food production facilities
- May be used as a pre-filter for enzymic HEPA filters
- Filtration media embedded with safe, natural enzymes

Model Designators

N2 - 9T - □ G

Depth Designator

Size Designator

Minipleat Designator

Enzymic Filter Designator

Microbial Inhibition Enzymic Minipleat Medium / High Efficiency Filter

ENZYMIC FILTER

Model	N2-9T-□G
Test Method	JIS B 9908:2011 Type 2
Efficiency	80%+ at 0.4μm / 90%+ at 0.7μm

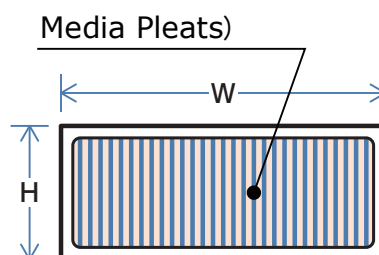
Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Average Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²	
N2-9T-320G	26				305				2.1
N2-9T-600G	56	147	343	610	610	65	80+	90+	3.7
N2-9T-830G	70				762				4.4

1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

Component Materials / Usage Conditions

Model		N2-9T-□G
Component Materials	Media	Enzyme Embedded Glass Fiber
	Separator	Thermoplastic Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Face Guard	Aluminum Lath
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



Available Sizes (mm)

Depth	Max Height	Max Width
65	610	1219

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Separator Type Medium/High Efficiency Enzymic Filter
- Sturdy design reinforced by aluminum separators
- Optimal for intake air treatment in hospitals, and pharmaceutical and food production facilities
- May be used as a pre-filter for enzymic HEPA filters
- Filtration media embedded with safe, natural enzymes

Microbial Inhibition Enzymic Separator Type Medium / High Efficiency Filter

ENZYMIC FILTER

Model	N2-CP-□-EA-□
Test Method	JIS B 9908:2011 Type 2
Efficiency	80%+ at 0.4μm / 90%+ at 0.7μm

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Average Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²	
N2-CP-EA-9A	56	137	343	610	610	292	80+	90+	9.1
N2-CP-EA-9B	28	88	245		610	150			4.4
N2-CP-EA-9C	28	137	343		305	292			5.8
N2-CP-EA-9D	14	88	245		305	150			2.8

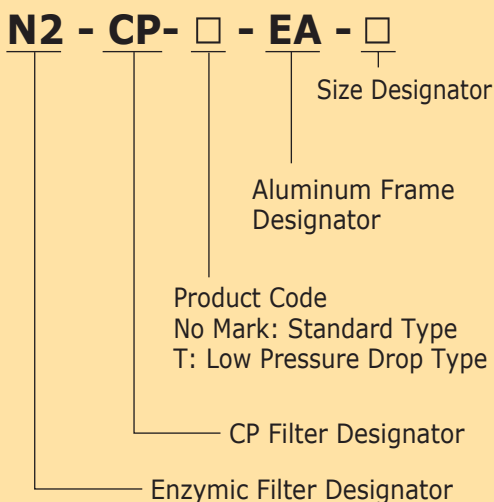
1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

Low Pressure Drop Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Average Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm¹	0.7μm²	
N2-CP-T-EA-9AS	56	98	343	610	610	292	80+	90+	11.1
N2-CP-T-EA-9CS	28				305				6.7

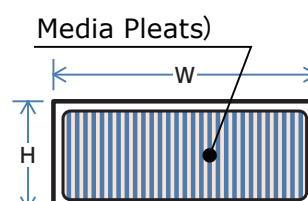
1. Geometric Average of 0.3~0.5μm
2. Geometric Average of 0.5~1.0μm

Model Designators



Component Materials / Usage Conditions

Model		N2-CP-□-EA-□
Component Materials	Media	Enzyme Embedded Glass Fiber
	Separator	Thermoplastic Resin
	Frame	Aluminum
	Frame Finish	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin
Usage Conditions	Gasket	Chloroprene
	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100



Available Sizes (mm)

Depth	Max Height	Max Width
65	610	1219

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- For radioisotope exhaust ventilation in medical and pharmaceutical facilities
- Sturdy design reinforced by aluminum separators

Model Designators

1AU - □

Size Designator

Incinerable Filter Designator

Absolute Filter Designator

Incinerable AU Type Separator Type HEPA Filter For Medical/Pharmaceutical RI Facilities

AU SERIES ABSOLUTE FILTER

Mode	1AU-□
Test Method	0.3μm
Efficiency	99.97%+

Component Materials / Usage Conditions

Model		1AU-□
Component Materials	Media	Reconstituted Fiber
	Separator	Treated Paper
	Frame	Plywood
	Sealant	Urethane Resin
	Gasket	Chloroprene
Usage Conditions	Max. Continuous Usage Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	85



- Energy saving, low pressure drop design

Model Designators

1LTPU - □

Size Designator

Incinerable, High Airflow Filter Designator

Absolute Filter Designator

PU Type Incinerable Filter Pleated HEPA Filter For Medical/Pharmaceutical RI Facilities

PU SERIES ABSOLUTE FILTER

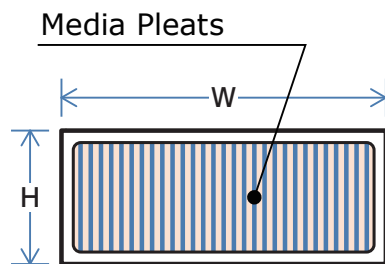
Mode	1LTPU-□
Test Method	0.3μm
Efficiency	99.97%+

Component Materials / Usage Conditions

Model		1LTPU-□
Component Materials	Media	Reconstituted Fiber
	Separator	Thermoplastic Resin
	Frame	Plywood
	Sealant	Urethane Resin
	Gasket	EPDM
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1AU-110	3.9	249	498	305	305	150	2.6
1AU-600	18			610	610	150	6.9
1AU-200	6.4			305	305	292	5.1
1AU-450	15			610	305		8.1
1AU-1000	32			610	610		13.6
1AU-1250	40			610	762		16.3



Available Sizes (mm)

Depth	Max Height	Max Width
150	610	1219
292	610	915

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.

High Airflow Type Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1LTPU-180	50	285	500	610	610	292	14
	(45)	(250)					



- For exhaust treatment in medical and pharmaceutical radioisotope facilities
- Volume reducible to 1/100

Incinerable FEU Type Charcoal Filter

For Medical/Pharmaceutical RI Facilities

U SERIES CHARCOAL FILTER

Model	FEU-1495
Test Method	W Type
Efficiency	25.4mm

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
		Initial Max	Height	Width	Depth	
FEU-1495	28.3	249	610	610	292	40

Component Materials / Usage Conditions

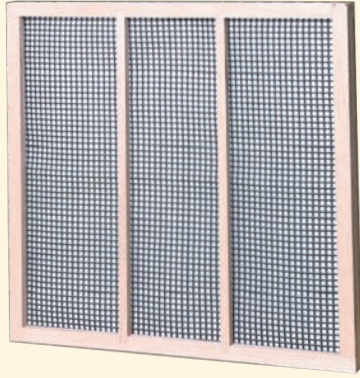
Model		FEU-1495
Component Materials	Media	Activated Carbon
	Cartridge	ABS, PET, PE
	Frame	Plywood
	Sealant	Polyurethane
	Gasket	Chloroprene / EPDM

Model Designators

FEU - 1495

Incinerable Filter Designator

W Type Charcoal Filter Designator



- For exhaust treatment in medical and pharmaceutical radioisotope facilities

Incinerable AU Type HI-PAC Filter

For Medical/Pharmaceutical RI Facilities

U SERIES HI-PAC FILTER

Model	PKAU-610-50
Test Method	JIS B 9908:2011 Type 3
Efficiency	60%+

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
			Height	Width	Depth	
PKAU-610-50	56	59	610	610	50	2

Component Materials / Usage Conditions

Model		PKAU-610-50
Component Materials	Media	Polypropylene
	Frame	Plywood
Usage Conditions	Max. Continuous Usage Temperature (°C)	80
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

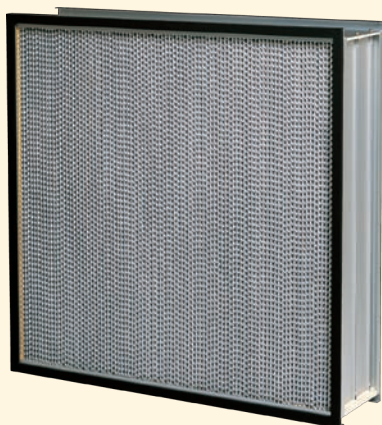
PKAU - 610 - 50

Depth Designator

Size Designator

Incinerable Filter Designator

Hi-Pac Filter Designator



- Space-saving high airflow, and energy-saving low pressure drop design

Absolute Filter

Separator Type HEPA Filter

For Nuclear Power Facilities

ABSOLUTE FILTER

Model		1□-□□-□	1L□-□□-□
		Standard Type	High Airflow Type
JIS Z 4812 Compliant Filter	Test Standard	0.15μm	
	Efficiency	99.97%+	
Filter for Nuclear Power Facilities	Test Standard	0.15μm / 0.3μm	
	Efficiency	99.97%+	

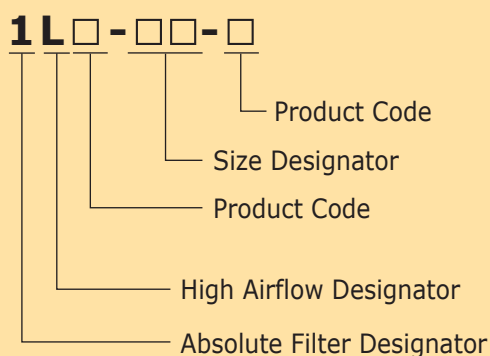
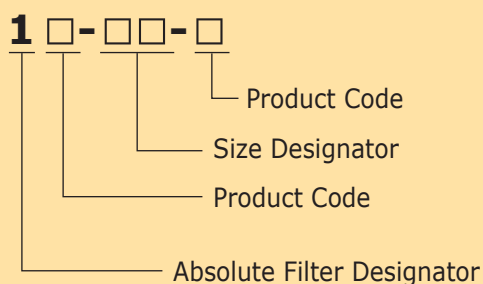
Component Materials / Usage Conditions

Model		A	D
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Plywood	
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	85	100

Model		EE	EA
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Steel Plate	Aluminum
	Frame Finish	Chrome Plating	Anodized Aluminum + Clear Acrylic Coating
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model		EU	H
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Stainless Steen	Flame-Retardant Plywood
	Sealant	Urethane Resin	
	Gasket	Chloroprene	
Usage Conditions	Max. Continuous Usage Temperature (°C)	60	
	Max. Peak Temperature (°C)	80	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model Designators



Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1□-110-□	3.9	249 (250)	498 (500)	305	305	150	2
1□-320-□	8.5			610	305		3.2
1□-600-□	18			610	610		5.2
1□-1200-□	36			610	1219		9.3
1□-200-□	6.4	249 (250)	498 (500)	305	305	292	4.3
1□-450-□	15			610	305		6.8
1□-1000-□	32			610	610		11.3
1□-1250-□	40			610	762		13.5

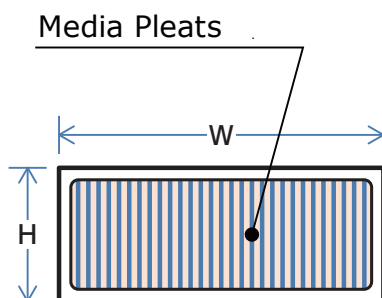
Pressure drop values in (): JIS Z 4812 Compliant Filters.

High Airflow Type Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1L□-20-□	6	249 (250)	498 (500)	305	305	150	2.2
1L□-40-□	12			610	305		3.4
1L□-100-□	28			610	610		5.7
1L□-205-□	56			610	1219		10.4
1L□-35-□	10	249 (250)	498 (500)	305	305	292	4.7
1L□-75-□	22			610	305		7.5
1L□-180-□	50			610	610		12.9
1L□-210-□	60			610	762		15.6

Pressure drop values in (): JIS Z 4812 Compliant Filters.

Available Sizes (mm)



Depth	Max Height	Max Width
150	610	1219
292	610	915

For horizontal airflows, install filters with pleats perpendicular to the ground.
Please contact us regarding availability of custom sizes.



- Reinforcing steel header and specialized media design for effective treatment of turbulent airflows

Reinforced Neo-Flo Bag Type Medium Efficiency Filter For Nuclear Power Facilities

MW SERIES NEO-FLO

Model	3□-□□-MW
Test Method	JIS B 9908:2011 Type 2
Efficiency	80%+ at 0.4μm / 90%+ at 0.7μm 85%+ at 0.4μm / 95%+ at 0.7μm

Standard Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)			Average Efficiency (%)		Weight (kg)
		Initial Max	Final	Height	Width	Depth	0.4μm ¹	0.7μm ²	
3SC-95-MW	70	147	294	592	592	940	85	95	6.3
3SC-85-MW		118	245				80	90	
3XC-95-MW	55	127	294			760	85	95	6
3XC-85-MW		88	245				80	90	

1. Geometric Average of 0.3~0.5μm

2. Geometric Average of 0.5~1.0μm

Cartridge Component Materials / Usage Conditions

Model		3□-□□-MW
Component Materials	Media	Glass Fiber
	Frame	SGC
	Installation Frame	Chrome-Plated Steel
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

3□ - □□ - MW

MW Series Designator

Efficiency Designator

Cartridge Type



- For nuclear facility exhaust treatment/radioactive waste reduction
- Incineration reduces volume to 1/978, weight to 1/269
- Low storage space requirement

Incinerable Bag Type Medium Efficiency Filter For Nuclear Power Facilities

U SERIES NEO-FLO

Model	U3□-85
Test Method	JIS B 9908:2011 Type 2
Efficiency	70%+at 0.4μm / 80%+at 0.7μm

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
U3S-85	71	157	245	592	592	940	3.0
U3X-85	56	127				760	3.0
U3P-85	42	118				560	2.5

Component Materials / Usage Conditions

Model		U3□-85
Component Materials	Media	Polypropylene
	Frame	Fire-Resistant Plywood
Usage Conditions	Max. Continuous Usage Temperature (°C)	60
	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

U 3 □ - 85

- Size Designator
- Neo-Flo Designator
- Incinerable Designator

Tray Type Charcoal Filter For Nuclear Power Facilities

CHARCOAL FILTER

Model	FC-J-1519
Bed Depth	50.8mm

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
		Initial Max	Height	Width	Depth	
FC-J-1519	9.43	310	159	610	678	37

Component Materials / Usage Conditions

Model		FC-J-1519
Component Materials	Media	Activated Carbon
	Frame	Stainless Steel
	Gasket	Chloroprene

W Type Charcoal Filter For Nuclear Power Facilities

CHARCOAL FILTER

Model	FD-J-1504
Bed Depth	50.8mm

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
		Initial Max	Height	Width	Depth	
FD-J-1504	17	625	610	610	368	67

Component Materials / Usage Conditions

Model		FD-J-1504
Component Materials	Media	Activated Carbon
	Frame	Stainless Steel
	Gasket	Chloroprene



- Compact, removable trays
- Customizable to treat specified airflows



- Self-contained unit for treatment of high airflows
- 50.8mm bed depth



- Light-weight, easy to handle self-contained unit
- 50.8mm bed depth

W Type Charcoal Filter For Nuclear Power Facilities

CHARCOAL FILTER

Model	FE-J-1492
Bed Depth	25.4mm

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)	External Dimensions (mm)			Weight (kg)
		Initial Max	Height	Width	Depth	
FE-J-1492	28	261以下	610	610	292	51

Component Materials / Usage Conditions

Model		FE-J-1492
Component Materials	Media	Activated Carbon
	Frame	Stainless Steel
	Gasket	Chloroprene

Incinerable Separator Type HEPA Filter For Nuclear Power Facilities

U SERIES ABSOLUTE FILTER

Model	1U-□□-□□	1LU-□□-□□
	Standard Type	High Airflow Type
Test Standard	0.3μm	
Efficiency	99.97%+	

Standard Specifications

Model	Rated Airflow (m ³ /min)	Pressure Drop (Pa)		External Dimensions (mm)			Weight (kg)
		Initial Max	Final	Height	Width	Depth	
1U-1000P-□□	32	249	498	610	610	292	14.5
1LU-160-□□	42.5						16.4

Component Materials / Usage Conditions

Model		1U / 1LU
Component Materials	Media	Reconstituted Fiber
	Separator	Polycarbonate
	Frame	Fire-Resistant Plywood
	Sealant	Epoxy Resin
Usage Conditions	Gasket	Chloroprene
	Max. Continuous Usage Temperature (°C)	121
Usage Conditions	Max. Peak Humidity (%RH at No Condensation)	100

Model Designators

1□-□□-□□

- Product Code
- Size Designator
- Incinerable Designator
U: Standard Type
LU: High Volume Type



- For nuclear and radioisotope facility exhaust treatment
- Bag-in/bag-out filter replacement

Sealed, Self-Contained Absolute Filter

Standard / High Airflow Types

SELF-CONTAINED ABSOLUTE FILTER

Model		1□S-□-□-□□	1L□S-□-□-□□
		Standard Type	High Airflow Type
JJIS Z 4812 Compliant Type	Test Standard	0.15μm	
	Efficiency	99.97%+	
Nuclear Type	Test Standard	0.15μm / 0.3μm	
	Efficiency	99.97%+	

Component Materials / Usage Conditions

Model		A	D
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Plywood	
	Gasket	Urethane Resin	
Usage Conditions	Max. Continuous Usage Temperature (°C)	104	121
	Max. Peak Humidity (%RH at No Condensation)	85	100

Model		GD	H
Component Materials	Media	Glass Fiber	
	Separator	Paper	Aluminum
	Frame	Fire-Resistant Plywood	
	Gasket	Urethane Resin	
Usage Conditions	Max. Continuous Usage Temperature (°C)	121	121
	Max. Peak Humidity (%RH at No Condensation)	80	100

Model		EE	EU
Component Materials	Media	Glass Fiber	
	Separator	Aluminum	
	Frame	Steel Plate	Stainless Steel
	Gasket	Urethane Resin	
Usage Conditions	Max. Continuous Usage Temperature (°C)	121	
	Max. Peak Humidity (%RH at No Condensation)	100	

Model Designators

1 □ □ S - □ - □ - □ □

Product Code

Adaptor Type

Size Designator

Self-Contained Filter
Designator

Product Code

Type Designator
No Mark: Standard Type
L: High Airflow Type

Absolute Filter Designator

Standard Specifications

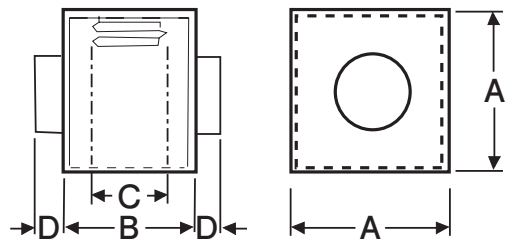
Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)				Weight (kg)
		Initial Max	Final	A	B	C	D	
1□S-110-□-□□	3.9	249 (250)	498 (500)	305	305	132	76	7.4
1□S-200-□-□□	6.4					264	100	10
1□S-600-□-□□	18			610	610	132	76	22.6
1□S-1000-□-□□	32					264	100	23.2

Pressure drop values in (): JIS Z 4812 Compliant Filters.
Pressure drop was measured with covers removed from up- and downstream faces.

High Airflow Type Specifications

Model	Rated Airflow (m³/min)	Pressure Drop (Pa)		External Dimensions (mm)				Weight (kg)
		Initial Max	Final	A	B	C	D	
1L□S-100-□-□□	28	249 (250)	498 (500)	610	610	132	100	23.2
1L□S-180-□-□□	50					264		31.9

Pressure drop values in (): JIS Z 4812 Compliant Filters.
Pressure drop was measured with covers removed from up- and downstream faces.



Adaptor Component Materials / Dimensions

Adaptor		PU		UU		TU	
Material		VP Tube/VU Tube		SUS304TP		SGP	
Type	Diameter	External Diameter (mm)	Internal Diameter (mm)	External Diameter (mm)	Internal Diameter (mm)	External Diameter (mm)	Internal Diameter (mm)
Standard	25	60	(51)	60.5	(53.5)	60.5	(52.9)
	50	89	(77)	76.3	(69.3)	76.3	(67.9)
	110	114	(100)	114.3	(106.3)	114.3	(105.3)
	600	318	(298)	318.5	(305.5)	318.5	(304.7)
	1000	318	(298)	318.5	(305.5)	318.5	(304.7)
High Airflow	100	318	(298)	318.5	(305.5)	318.5	(304.7)
	180	370	(348)	355.6	(339.6)	355.6	(339.8)

HEPA / ULPA Filter Standards

ISO 29463-1 : 2011														EN1822-1: 2009
Class	Group	Overall Value		Local Value		Overall Efficiency Test		Local Efficiency Test (As agreed between supplier and customer)						
ISO 15	E	≥95	≤5	—	—	●	●	Group E filters not tested for classification.						E11
ISO 20		≥99	≤1	—	—	●	●							—
ISO 25		≥99.5	≤0.5	—	—	●	●							E12
ISO 30		≥99.9	≤0.1	—	—	●	●							—
ISO 35	H	≥99.95	≤0.05	≥99.75	≤0.25	●	●	●	●	●	●	●	H13	
ISO 40		≥99.99	≤0.01	≥99.95	≤0.05	●	●	●	●	●	—	—	—	
ISO 45		≥99.995	≤0.05	≥99.975	≤0.025	●	●	●	●	●	—	—	H14	
ISO 50	U	≥99.999	≤0.001	≥99.995	≤0.005	●	●	●	—	—	—	—	—	
ISO 55		≥99.9995	≤0.0005	≥99.9975	≤0.0025	●	●	●	—	—	●	—	U15	
ISO 60		≥99.9999	≤0.0001	≥99.9995	≤0.0005	●	●	●	—	—	●	—	—	
ISO 65		≥99.99995	≤0.00005	≥99.99975	≤0.00025	●	●	●	—	—	●	—	U16	
ISO 70		≥99.99999	≤0.00001	≥99.9999	≤0.0001	●	●	●	—	—	●	—	—	
ISO 75		≥99.999995	≤0.000005	≥99.9999	≤0.0001	●	●	●	—	—	●	—	U17	
Test Methods: Efficiency/Leak Tests: At Rated Airflow Efficiency Tests: At MPPS (Most Penetrating Particle Size)						ISO29463-4	ISO29463-5	ISO 29463-4						E10 omitted
						Test with Movable Probe	Test with Static Probe	Annex C	Annex A	Annex B	Annex E	Annex F	Annex G	Scan Tests per EN1822
								Scan Test at MPPS	Oil Thread Leak Test	Photo-meter Leak Test	PSL Leak Test	0.3-0.5µm Leak Test	Photo-meter Overall Test	

IEST-RP-CC001.4 : 2005									
Type	Penetration Test			Leak Test (IEST-RP-CC034.2)					
	Method	Aerosol	Min. Efficiency Rating (%)	Equipment	Aerosol	Factory Penetration (%)	in situ Penetration (%)	Comments	
HEPA (A)	MIL-STD-282	Thermal DOP (0.3µm MMD)	99.97	None				Two-Flow Leak Test	
HEPA (B)			99.97						
HEPA (C)			99.99	Photometer	Polydisperse	0.01	0.01		
HEPA (D)			99.999			0.005	0.01		
HEPA (E)			99.97	None				Two-Flow Leak Test	
ULPA (F)	IEST-RP-007	Open	*99.9995	Particle Counter	Open	0.0025	0.005	Media Testing at MPPS	
S. ULPA (G)	IEST-RP-021		*99.9999			0.001	0.002		
HEPA (H)	IEST-RP-007		*99.97	Photometer	Polydisperse	–	–	Two-Flow Leak Test	
HEPA (I)			*99.97	None	Open	–	–		
HEPA (J)			*99.99	Particle Counter or Photometer	Polydisperse	0.01	0.01	When Photometer/ Aerosol Generator used.	
ULPA (K)			*99.995		Thermal	0.008	0.01		

*Arrestance Efficiency: Lower result of tests at 0.1-0.2µm and 0.2-0.3µm particles.
Two-Flow Leak Test: 100% and 20% of Rated Airflow

Coarse Particle and Medium Efficiency Filter Standards

•USA

ASHRAE 52.2 : 2007				
MERV	Efficiency by Average Particle Size (%)			Average Arrestance (%)
	E1 0.3~1µm	E2 1~3µm	E3 3~10µm	
1	—	—	E3<20	Aavg<65
2	—	—	E3<20	65≤Aavg<70
3	—	—	E3<20	70≤Aavg<75
4	—	—	E3<20	75≤Aavg
5	—	—	20≤E3<35	—
6	—	—	35≤E3<50	—
7	—	—	50≤E3<70	—
8	—	—	70≤E3	—
9	—	E2<50	85≤E3	—
10	—	50≤E2<65	85≤E3	—
11	—	65≤E2<80	85≤E3	—
12	—	80≤E2	90≤E3	—
13	E1<75	90≤E2	90≤E3	—
14	75≤E1<85	90≤E2	90≤E3	—
15	85≤E1<95	90≤E2	90≤E3	—
16	95≤E1	95≤E2	95≤E3	—

Equip.	Particle Counter		
Test Particles	MERV1~4	Dust Load	ASHRAE Dust
		Aerosol	
	MERV5~16	Dust Load	KCL(solid Potassium Chloride)
		Aerosol	
		Generator	Atomizer

•EUROPE

EN 779 : 2012			
Class	Ave. Eff. (%)	Min. Eff.	Final Pressure Drop
	Am: Synthetic Dust Em: 0.4µm Particles	Ef: 0.4µm Ct.	
G1	50≤Am<65	—	250Pa
G2	65≤Am<80	—	
G3	80≤Am<90	—	
G4	90≤Am	—	
M5	40≤Em<60	—	450Pa
M6	60≤Em<80	—	
F7	80≤Em<90	35≤Ef	
F8	90≤Em<95	55≤Ef	
F9	95≤Em	70≤Ef	
Equip. Particle Counter			
Am Method Particles	Dust Load	ASHRAE Dust	
	Aerosol		
Em Method Particles	Dust Load	DEHS	
	Aerosol		
	Generator	Nebulizer + Laskin Nozzle	

•JAPAN

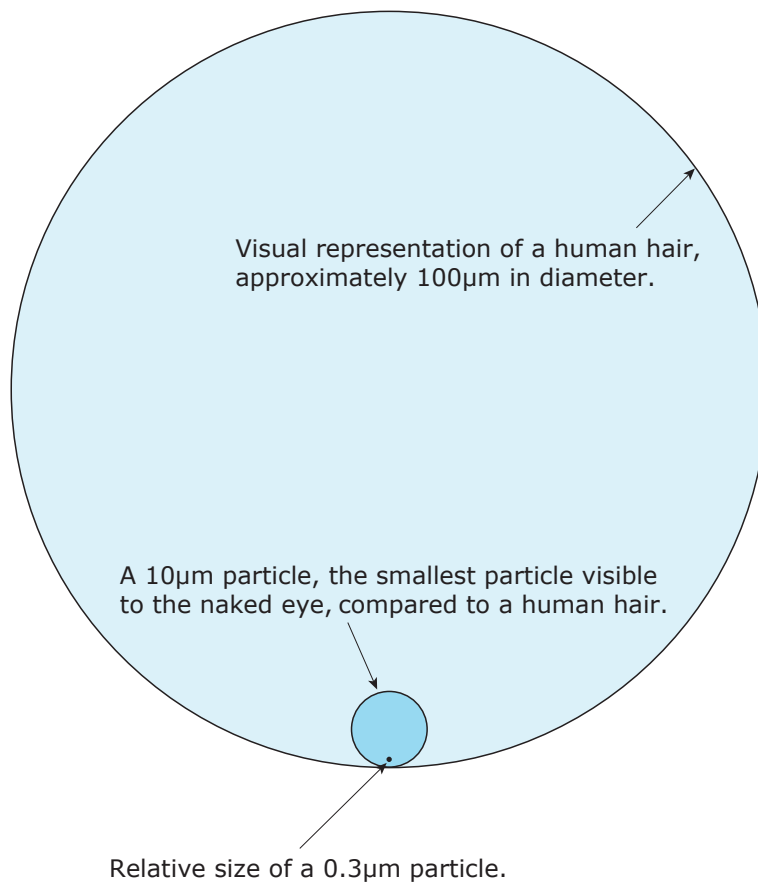
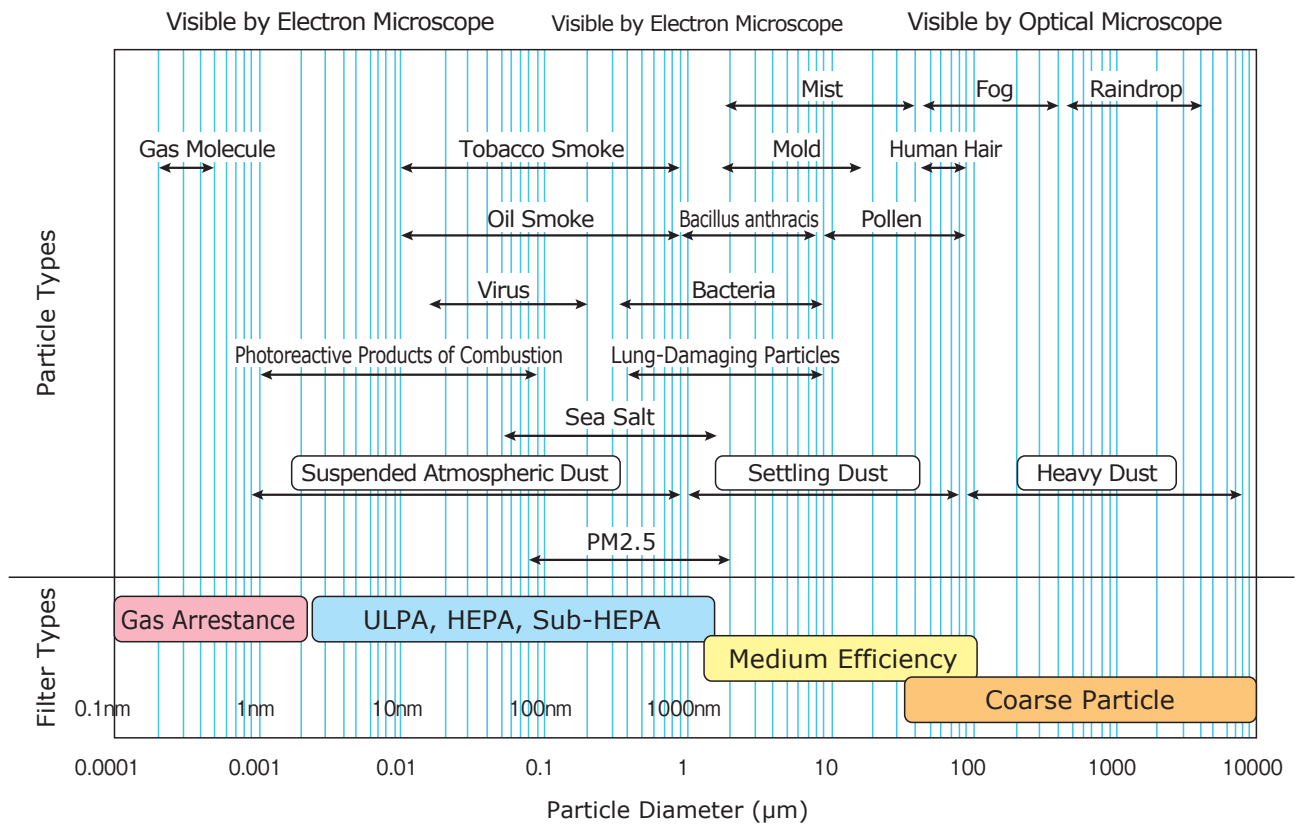
JIS B 9908 : 2011				
Method	Category	Main Test Equipment	Aerosol	Final Pressure Drop
Type 1	Particle Arrestance (0.3µm) Pesre Drop	Filter unit with initial arrestance 90%+ at ave. size 0.3µm	Poly-disperse PAO or similar	—
Type 2	Particle Arrestance (by size) Dust Load Pressure Drop	Filter unit with initial arrestance up to 99% at ave. size 0.4µm	Per JIS-11 (solid)	375Pa
	Arrestance after ESD removal		PAO or similar	—
Type 3	Particle Arrestance (gravimetric) Dust Load Pressure Drop	Filter unit with initial (gravimetric) arrestance up to 98% at ave. size 0.4µm	Per JIS-11 (solid)	250Pa
Type 4	Particle Arrestance (0.5-1µm) Ozone Generation Pressure Drop	Electric Dust Collector	Poly	—

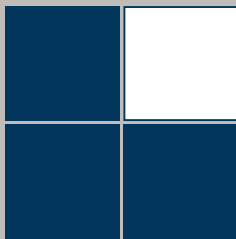
0.7µm Particles per JIS B 9908:2011:

Tests have shown that colorimetric tests results per JIS B 9908:2001 are equivalent to 0.7µm.

Equip.	Particle Counter	
Type 2 Test Particles	Dust Load	Per JIS-11
	Aerosol	Per JIS-11
	Generator	Rotary Brush Fluidized Bed Gasifier

Atmospheric Particles





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