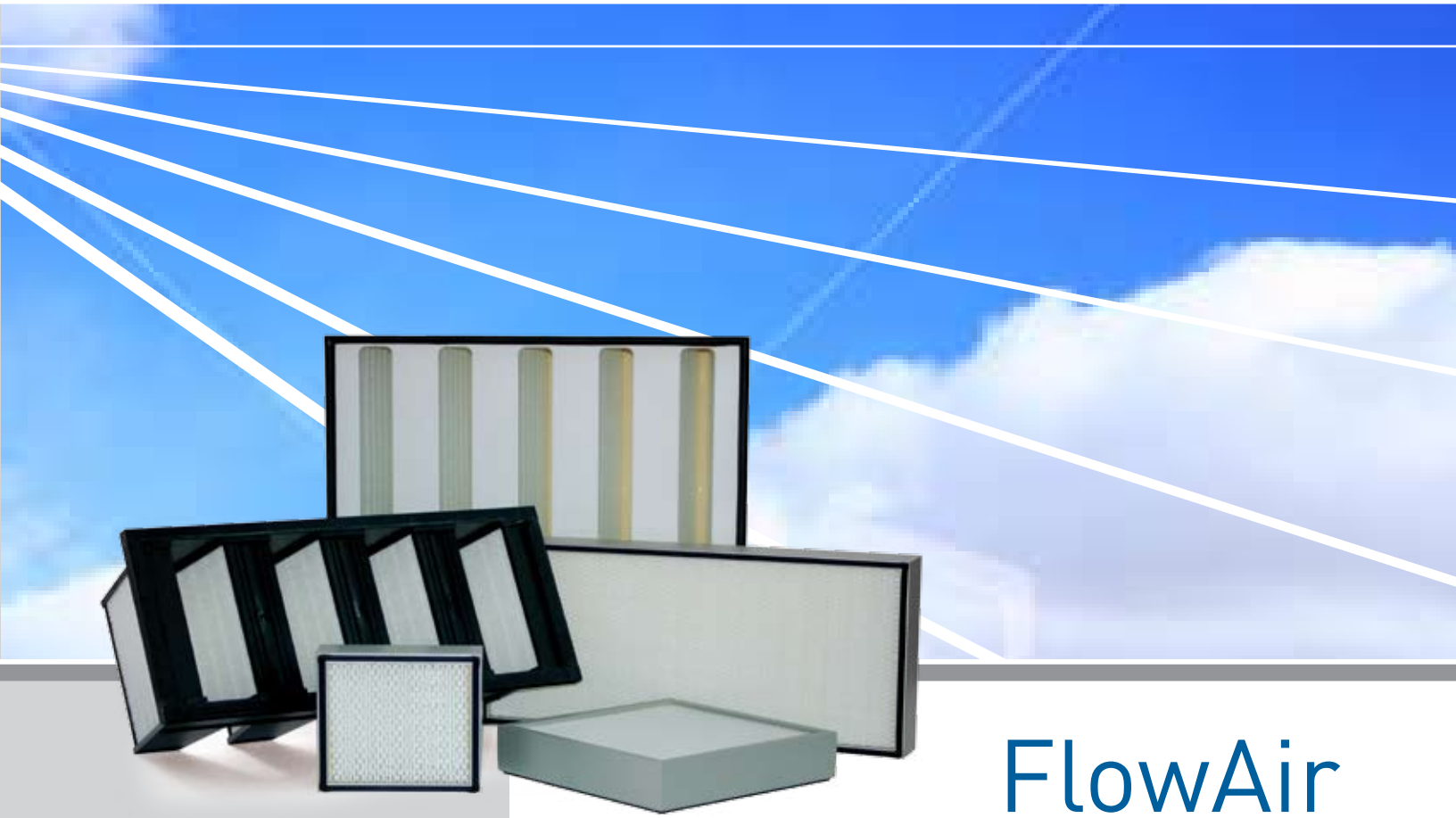
FlowAir
FILTERS



FlowAir
CATALOGUE

www.flowairfilters.com

The "FPR" is a rigid pocket filter. Type V-Bank. Specially designed to remove fine dust, smoke vapors and bacteria.

The FPR is suitable for air conditioning installations, as well as a final or a pre filter in clean rooms. Its replacement is easy when it's clogged.

The FRP filter has a mold plastic frame and is recyclable.

Rigid Pocket Filter (FPR)

"FPR" Filter – Performance

- The FPR can be used in positive or negative pressure.
- The mini-pleat technology extended the filter surface.
- Normal airflow: Up to 850 CFM.
- Media: fiber glass
- Depth: 11½ ": low space required, very compact
- Light weight and easy installation.

Efficiency

The FPR is available in different efficiency rates:
65%, 85%, 95% and 98% on dust spot efficiency and 96% on DOP efficiency.
Merv 11, 13, 14, 15 on the ASHRAE standard 52.2 and 96% on DOP efficiency.

Structure

- Frame Header thickness 7/8
- Plastic Frame
- Temp. of utilization 176ºF maximum

Final pressure recommended 2" w.g.

Hotmelt separators

Fiber Glass Media

Technical Data

Filter class	FPR 06	FPR 07	FPR 08	FPR 09	FPR 11
Filter class according to EN 779	F6	F7	F8	F9	
Filter class according to EN 1822	-	-	-	-	H11
Filter class according to ASHRE 52.5	MERV 11	MERV 13	MERV 14	MERV 15	-
Maximum ambient temperature	176°F	176°F	176°F	176°F	176°F
Maximum relative humidity	100%	100%	100%	100%	100%

Technological Data Table

Size code	Dimensions			flow Rate CFM at ½" (w.g)					Weight (lb)	Filtration Surface Ft²
	Length	Width	Depth	F6	F7	F8	F9	H11		
36	11 3/8	23 3/8	11½	1,447	1,329	1,235	1,118	647	7	96.9
46	19 3/8	23 3/8	11½	2,447	2,247	1,982	1,806	1,094	10	156.1
66	23 3/8	23 3/8	11½	2,941	2,718	2,471	2,247	1,294	12	202.0

The filter is especially design to conform installation in universal types of frames.

Order No. of FPR

Size code

	Dimensions (inches)		
Size Code	Length	Width	Depth
3 6	11 3/8	23 3/8	11½
4 6	19 3/8	23 3/8	11½
6 6	23 3/8	23 3/8	11½

* Filters are available in accordance with customer's special request.

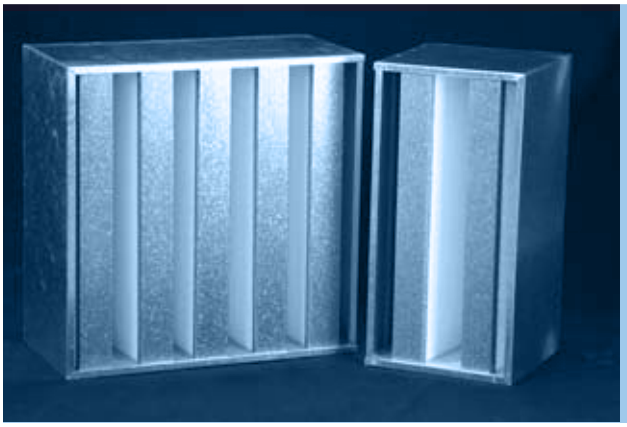
Efficiency

Efficiency Code	ASHRAE 52.2	EN 779
06	MERV 11	F6
07	MERV 13	F7
08	MERV 14	F8
09	MERV 15	F9
11	-	H11 (EN1822)

Order No

Filter Code	Efficency code	Size Code
FPR		

FlowAir FILTERS



The "DH" filter is a high flow capacity filter with mini-pleats and a molded plastic frame. Thanks to its five pockets design the "DH" can be used in Heat, Ventilation and Air conditioning systems (HVAC systems), clean rooms or any controlled areas.

The "DH" filters are tested in accordance with the most updated international standards EN 1822 norm and UL norm by "Leak Detection System" test equipment.

The mini-pleat micro fiber glass media has efficiency from H10 (DOP efficiency: 96% @ 0.3 µm) to H14 ((DOP efficiency: 99.995% @ 0.3 µm). It is conditioned in a rigid cardboard which guarantees a perfect protection.

Thanks to its new plastic frame the new "DH" filter is recyclable.
The filters are individually tested and serialized. The data from the test results are provided on a label tag attached to the filter: Efficiency level, Airflow rate, Pressure drop and Physical dimensions.

DH Filter

"DH" Filter – Performance

- High holding, dust capacity.
- Micro Fiber Glass media.
- Extreme flow rate, up to 3000 CFM

Structure

- Plastic/Galvanized steel/stainless frame
- Hot melt separators.
- Fiber Glass media

Final pressure recommended 2½" (w.g)

Very high capacity

Temp of utilisation: 176°F maximum

Technical Data

	DH 10	DH 12	DH 13	DH 14
EN 1822	H 10	H 12	H 13	H 14
MPPS	85%	99.5%	99.95%	99.995%
DOP	96%	99.97%	99.99%	99.999%
Maximum ambient temperature	176°F	176°F	176°F	176°F
Maximum relative humidity	100%	100%	100%	100%

Technological Data Table

	Size (Inch)			Flow rate in [cfm] at 1"wg				Weight	Filtration surface
Size code	Length	Width	Depth	DH10	DH12	DH13	DH14	Lbs	SQFt
3/6	12	24	11 ½	1180	940	880	710	28	172
6/6	24	24	11 ½	2940	2470	2350	1770	48	430
2/5	11 ⅜	23 ⅜	11 ½	1000	823	770	650	26	161
5/5	23 ⅜	23 ⅜	11 ½	2650	2240	2060	1650	46	409

Order No. of DH Filters

Gasket

Code	
0	Without
1	One side
2	Two sides

Frame

Code	
P	Plastic
G	Galvanized metal
X	Stainless steel

Efficiency

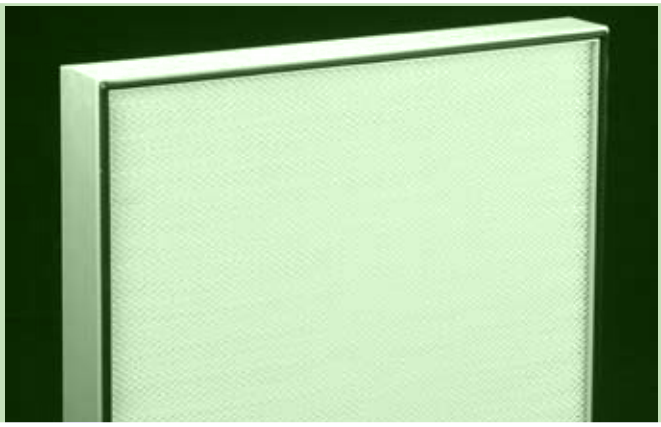
Code	EN 1822
10	H 10
12	H 12
13	H 13
14	H 14

* Filters are available in accordance with customer's special request.

Order No

Filter code	Efficency code	Size Code	Frame Code	Gasket code
DH				

FlowAir FILTERS


The Flow Air Filter, "M Filter", is HEPA and ULPA types with mini-pleats and Hot Melt Separators. This special technology optimizes the pleat density and enables to manufacture the most flexible and cost effective "Clean Rooms" and "Laminar flow cabinets".

Those filters are tested in accordance with the most updated international standards the ISO 9001 and now according to the US standard UL 900.
The "M" filter is an integral element of the clean rooms, clean benches, clean airflow systems and laminar flow benches from ISO1 to ISO9.

The "M filter" media efficiency is from H13 to U17. The mini-pleats technology helps the decline of the pressure drop and the airflow resistance.

ISO 14644-1: Classification of Air Cleanliness ISO1 to ISO9.

The Micro Fiber Glass media is in accordance with efficiency standards H13 to U17.

The constant space media is pleated in a way to obtain minimum losses and to reduce filter's pressure drop .

M Filter

Structure and Data

- A solid and light anodized aluminum frame.
- Hotmelt separators
- Polyurethane sealant: the elasticity of the seal improve its air tightness during the filter life.
- The filter is tested by a "Leak Detection System" scan
- Each filter is controlled and serialized according to strict procedures.
- All the filter data appears on its frame: Efficiency, Flow Rate, Pressure drop and nominal dimensions.
- Certificate of Testing is added to each filter.
- The filters are conditioned in rigid cardboard for a perfect protection.
- Media of Ultra Fine Fiber Glass

Options

1. Laminator Net: The purpose of the net is to neutralize turbulences and increace the airflow laminarity.
2. Recyclable HEPA filters - In order to conform with ecological norms, "M" filters can have Plywood frame with no metallic parts. The filter may be incinerated without emitting residual toxic gas or dust.
3. Blue gel sealant - Instead of polyurethane gasket the filter can be sealed, in better way, by putting Blue gel sealant.

Final recommended pressure: 2" w.g.

Efficiency in accordance with: EN 1822 standard: H14 – U17 levels

Maximum ambient Temp.: 176°F

Technical Data

Efficiency	H-14	U-15
DOP	99.999%	99.9999%
MPPS	99.995%	99.9995%
Max. Temp.	176°F	176°F
Max. relative humidity	100%	100%

Technological Data

Size Code	Size in inches			Weight In Lb's	Flow rate in CFM at 1"(w.g)	
	Length	Width	Depth		HEPA H14	ULPA U15
2/2	8	8	3	2	80	66
3/3	12	12	3	4	175	140
3/6	12	34	3	8	350	280
3/7	12	30	3	12	440	350
3/9	12	36	3	14	500	400
6/4	24	18	3	10	540	430
6/6	24	24	3	18	700	570
6/7	24	30	3	22	900	720
6/9	24	36	3	28	1060	850
6/12	24	48	3	36	1,400	1,130
6/15	24	60	3	44	1,650	1,300
6/18	24	72	3	52	1,980	1,580
7/7	30	30	3	28	1,000	830
7/9	30	36	3	34	1,200	1000
7/12	30	48	3	46	1,650	1,300
7/15	30	60	3	58	2,100	1,650
7/18	30	72	3	68	2,470	2,000
9/9	36	36	3	42	1,500	1,200
9/12	36	48	3	56	2,000	1,600
9/15	36	60	3	68	2,500	2,000
9/18	36	72	3	74	3,000	2,400

Order No. of M Filters

Grid

code	
P	Epoxy
X	Stainless Steel
L	Laminator

Frame

code	
A	Aluminum
W	MDF
X	Stainless steel
G	Galvanized Metal

Efficiency level

Code		
	EN 1822	
14	H-14	99.99%
15	U-15	99.999%

Sealant

code	
BG	Blue Gel
Poly	Polyurethan Gasket

* Filters are available in accordance with customer's special request.

Order No

Filter Code	Efficency code	Size code	Frame Code	Grid code	Sealing
M					

FlowAir FILTERS

The Jet filter is an HEPA/ULPA type. Terminal duct filters are using mini-pleats and Hot Melt Separators. The structure of the ducted unit is made of molded ABS.

These filters are tested in accordance with the most updated international standards the ISO 9001, US standard UL 900 and international standard EN 1822

The" Jet filter" is an integral element in clean rooms, clean benches, clean airflow systems and laminar flow benches from ISO1 to ISO9.
The "Jet filter" media efficiency is from H14 to U17. The mini-pleats technology helps to decline the pressure drop and the airflow resistance.

Jet Filter

Structure and technical data

- The ducted unit is made in molded ABS, which prevents heat gain and condensation of moisture. It also can be made of galvanized steel.
- A solid and light anodized aluminum frame for the HEPA filters.
- The media pack is potted over its all circumference with polyurethane sealant.
- The filter is tested by a "Leak Detection System" scan
- Each filter is controlled and serialized according to strict procedures.
- Certificate of Testing is added to each filter.
- The filters are conditioned in rigid cardboard for a perfect protection.

Options

1. Available in pack depths from 2" to 4".
2. Frame: Knife edge seal for clean room.
3. Structure: Stainless steel, Aluminum.
4. Lateral drive connection.
5. Adjustable flow Rate and internal test port for integrity test.
6. Stainless steel filter screen.
7. Gasket black closed-cell neoprene.

Technical Data

Efficiency EN 1822	H-14	U-15
DOP	99.999%	99.9999%
MPPS	99.995%	99.9995%
Max. Temp	176^{0}F	176^{0}F
Max. relative humidity (at peak)	100%	100%

Technological Data Table

	Size (inch)			Duct diameter (inch)		Flow rate in CFM At 1" W.g	
SIZE Code	Length	Width	Depth	A	B	H-14	U-15
3/6-FR	12	24	3	6	6	350	300
3/7-FR	12	30	3	6	6	440	370
6/6-US	23 3/8	23 3/8	3	8	10	700	580
6/6-IL	23 5/8	23 5/8	3	8	10	730	600
6/6-FR	24	24	3	8	10	740	610
6/12-US	23 3/8	47 3/8	3	10	12	1400	1150
6/12-IL	23 5/8	47 5/8	3	10	12	1420	1170
6/12-FR	24	48	3	10	12	1430	1200

Order No. of JET filter

Integrity Port	
N	No Integrity Port
P	With Integrity Port

Value	
0	Value
1	No Value

Gasket	
0	No Gasket
1	Flat Gasket
2	Rounded neoprend gasket

Thickness Frame		
	Total Height	Thickness
A	9"	2 3/4"
B	10"	3 1/8"

Grid	
P	Epoxy
X	Stainless Steel

Structure duct	
P	ABS
A	Aluminum
X	Stainless

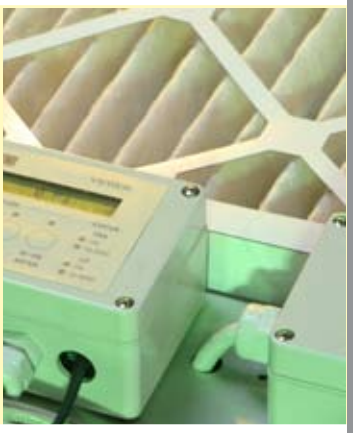
Duct connection	
H	Horizontal duct
V	Vertical duct

Efficiency	
14	H-14
15	U-15

Order No

Filter Code	Efficiency	Size Code	Duct connection	Duct (A/B) Θ	Structure Duct	Grid	Thickness Frame	Gasket	Valve	Integrity port
JET										

FlowAir FILTERS



The I Gel and Fan Jet are our last generation of fan filter units. Their ECM (Electronically Communateted Motor) motor from General Electric permits a constant air flow of 90 Fpm even if there is a pressure drop or a clog of the filter.

Their aluminum structure with insulation, reduce the sound of the fan and guarantees a minimum of noise in the clean room.

Fan Filter Units (FFU) I-GEL and FAN JET

ECM Technology (available in DC motors only)

Thanks to the said technology, the motor speed and power consumption are monitored. The motor changes its speed in accordance with the increasing or reducing of the pressure drop.
The technology permits an auto regulation of the motor speed to keep a perfect flow.
The ECM motor is controlled by the software "EOL-2" from Lemmens LTD. The software is implemented in a central micro controller.

Advantages

- The ECM motor is more precise and efficient than ACM motor. The measurements are internal and do not depend of external measuring instruments, using the internal electronic card.
- Several parameters can be analyzed at the same time as: Intensity, Coupling and motor speed.
- Low electric consumption. 80 Watt (30% to 40% less than ACM motor).
- Low Noise Level: 48dBA.
- Energy Saving

Maintenance (For the I-Gel)

Due to this conception, the replacement of the absolute filter is carried out underneath the unit (easy and fast activity from the inside of the clean room).

Structure

I-GEL	Fan Jet
Noise insulation which reduces the fan's noise.	
Weight: 76 Lbs.	Low weight: Less than 66 Lbs.
Hight: 16"	Low height: 14"
Sealant: Blue Gel, which provides perfect air tightness.	Sealant: Polyurethane

Technical Data - I-GEL/FANJET

Main Filtration – Blue Gel filter, type MK - (for I-GEL)
Main Filtration – M14 600/1210/230AP - (for FANJET)

Efficiency EN 1822	H-14	U-15
MPPS Efficiency	99.995%	99.9995%
Max ambient Temp›	176°F	176°F
Max relative humidity	100%	100%

Pre Filtration - W-04-20-24-1-C

Efficiency: ASHRAE 52.2 (EN 779:2002)	MERV 5 (G-3)
Average mean arrestance	95%
Initial pressure drop	<0.12 inches w.g

Ventilation

1 Fan	
Normal use	80 w, 800 rpm
Power	1/3 HP
Rotation speed	1000rpm (max)
Noise catcher include	48 dBa

I GEL and FANJET ECM

Air speed	Fan		
	Absorbed power		Sound level
f/m	V	W	dBa
70	110/220V	34	38.3
90	110/220V	58	46.7
110	110/220V	88	46.8

Order No. of I-GEL and FANJET

Hanging Hooks	
N	Without
H	With

Filter Grid	
P	Epoxy painted metal
X	Stainless steel

Structure	
A	Coated Aluminum
X	Stainless steel

Motor Type	
AC	AC Motor
DC	DC Motor

I-GEL (with gel sealant) | FANJET (integrated sealant)

Size Code in Inches	
660	24 x 24
670	24 x 30
690	24 x 36
612	24 x 48
1212	48 x 48

Efficiency	
14	H-14 According to EN1822
15	U-15 According to EN1822

Order No

FFU Code	Efficiency	Size Code in Inches	Structure	Motor Type	Grid	Hanging Hooks
I GEL						
FAN JET						

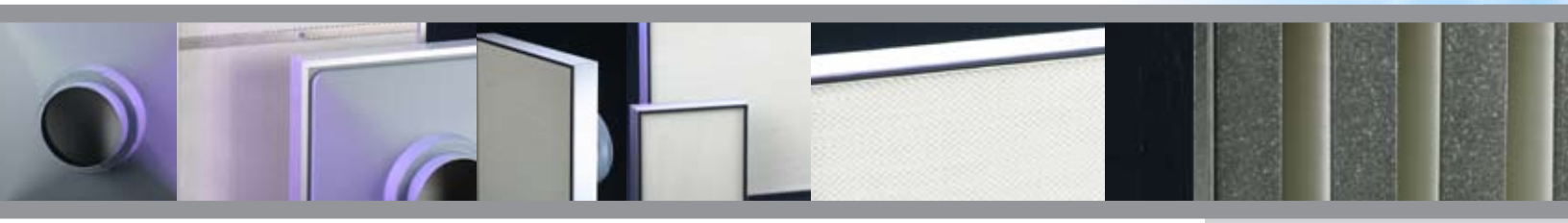
FlowAir
FILTERS

COMPANY'S PROFILE

"Flow Air Filters" is one of the largest Companies, in Europe and in the Middle East, to design, develop, manufacture and service of comprehensive variety of filters.

"Flow Air Filters" filters are especially suitable for high requirements and performances of air handling units and air filtration systems, currently used in laboratories, pharmaceutical, microelectronics and food industries.

Flow Air Filters' engineering and production departments are able to manufacture and supply standard and any kind of custom designed filters according to the customer's specific requests.
The company has experience over 30 years in the filters area and keeps in stock very wide scale of inventory of different items.
In order to be able to provide our products in an efficient manner and to supply the items "just in time", the company keeps a large warehouse near Paris in France, a large warehouse in Middle East and a new office in Chicago in U.S.A, which contain more than 10,000 filters as standard for all kind of efficiencies .



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National Air Filtration Association