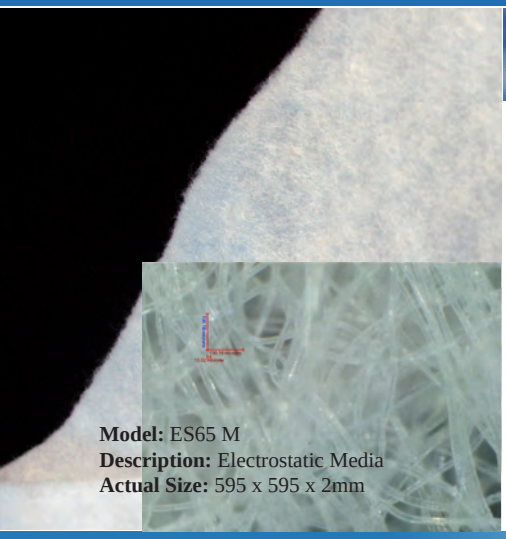
IF ES ElectroStatic Pleated Disposable

MERV11 Primary Filters



Model: ES65 M
Description: Electrostatic Media
Actual Size: 595 x 595 x 2mm

General Characteristics

ES Electrostatic Pleated disposable filters are made with 100% synthetic needle punched and electrostatically charged media during media manufacturing. The electrostatic charged filter has a tremendous increase efficiency in the range of particles of 1-3 micron size.

ES Pleated Disposable is of extended surface and fully disposable. They can be used as primary or pre filters in Fan Coil Units (FCU), Air Handling Units (AHU) or Fresh Air Fans (FAF) in both new or existing air filtration system. The flat media pad can also be used as filter in split units to prevent dust build up in the coils. The pleated filter has greater extended surface allowing higher dust holding capacity and longer replacement intervals compared to flat panel filters. It is used as a pre-filter which considerably extends the life of other secondary filters in the filtration system. The higher efficiency filter greatly prevents dust build-up on heating and cooling coils, fans and duct.

Model: **ES65 IF or ES13 IF**
Description: ES Pleated MERV11 /MERV13
Nominal Size: 24x24x2" WxHxD
Actual Size: 595x595x45mmt WxHxD
Thickness available 1" 2" 4"

+ Primary Filters with MERV11 and MERV13 Efficiencies

+ Synthetic ElectroStatic ES Pleated Media

+ Fit Universal 2" or 4" Filter Holding Frame
Immediate Replacement from exisiting prefilter for Haze or high dust conditions

+ Fully Disposable

Construction

ES Electrostatic filter media comprises permanent electrostatically charged 100% synthetic media. Independent tested against ASHRAE 52.2, the ES65 Pleated can achieve MERV 11 value with Average Composite Particle Size Efficiency is >65% (Range 2 1.0-3.0um). The ES13 Pleated can achieve MERV 13 value with Average Composite Particle Size Efficiency >85%(Range 2 1.0-3.0um).

The raw material is antimicrobial and it is a byproduct of the manfacturing process of the filter media as opposed to non-permanent sprayed products.The antimicrobial feature inhibit the growth and reduce the microorganisms like bacteria, fungi on the filter media which may otherwise deteriorate the filter integrity.

The media support is an expanded diamond grid with an effective open area of not less than 98%. The corrosion resistant wire grid is laminated to the filter media to maintain pleat shape and reduce media oscillation.

The radial V pleat design ensures the maximum use of the filter media as well as maximising the dust holding capacity and extending the service life.

The enclosing frame is constructed of a rigid, heavy duty kraft board with diagonal support members bonded to each pleat upstream and downstream side to ensure pleat spacing and stability. The filter pack is bonded to the enclosing frame to eliminate the possibility of air bypass. Pleat stablilisers are included for 4" filters to ensure pleat spacing and rigidity.

Optional Galvanised steel or aluminium Frame is available with corrosion resistant expanded GI mesh as downstream air face support.

IF International Filtration

Note : Filter lifespan and performance will vary on site conditions and initial or equipment design, ventilation and aircon design is still prevalent. Higher replacement frequency due to higher efficiency.

IF ES ElectroStatic Pleated Disposable

MERV11, MER13 Primary Filters

Specifications

Model	ES65 IF			ES13 IF			ES65 M
Description	ES Pleated MERV11			ES Pleated MERV13			ES Media MERV11
Nominal Thickness	1"	2"	4"	1"	2"	4"	2mm
Rated Air Flow cmh	2000	3400	3400	2000	3400	3400	1000
Face Velocity m/s	1.5	2.5	2.5	1.5	2.5	2.5	0.75
Face Area m^2	0.372	0.372	0.372	0.372	0.372	0.372	0.372
Initial Pressure Drop Pa	85	66	53	115	95	76	40
Filter Class EN779 / Eurovent 4/4	M6 / EU6			F7 / EU7			M5 / EU5
ASHRAE 52.76 Average Dust Arrestance Efficiency >10um	95%			98%			92%
ASHRAE 52.1-1992 Average Dust Spot Efficiency >1um	60-65%			80-85%			40-55%
ASHRAE 52.2-1999 Minimum Efficiency Reporting Value (MERV)	MERV 11 >65%@1-3micron			MERV 13 >85%@1-3um			MERV11 65%@1-3micron
Media Area m^2	8.8	17	20	8.8	17	20	0.37
Pleats per 24x24"	24	28	16	24	28	16	NA

Different test methods are provided for comparision and information.
Filter lifespan and performance will vary on site conditions, initial equipment design. Aircon and ventilation design is still prevalent.
Typical dust environment have big dust >10um and they are heavier. Due to higher efficiency which keep coil clean, more replacement frequency expected. Secondary filters like Interpocket,Interfirm Rigid,Vcell Filters are recommended and should be installed for longer lifespan and to prevent dust breakthrough.

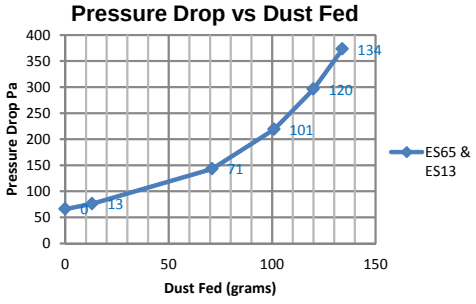
Technical Data

Filter Media
Polypropylene Synthetic Blend
Electret Media

Enclosing Frame
Heavy Duty Moisture-resistant Kraft board
Option: Galvanised Steel/ Aluminium with Downstream face Expanded Mesh

Sealant
Water based adhesive

Continuous Operating Temperature	80°C
Relative Humidity	90%
Recommended Final Pressure Drop	150 Pa
Maximum Final Pressure Drop	250 Pa
Flammability	Non flammable



Dimensions

Nominal Size L x W x D	Actual Size L x W x D	Rated Air Flow m^3/h at		Pleats High Cap	Media Area sqft
in inch	in mm	1.5 m/s	2.5 m/s	HC	
12 x 24 x 1	289 x 595 x 21	1020	1700	12	3.2
16 x 20 x 1	395 x 495 x 21	1130	1880	16	3.5
16 x 24 x 1	395 x 595 x 21	1360	2265	16	4.3
16 x 25 x 1	395 x 622 x 21	1428	2380	16	4.4
18 x 24 x 1	444 x 595 x 21	1530	2550	18	4.8
20 x 20 x 1	495 x 495 x 21	1428	2380	20	4.4
20 x 24 x 1	495 x 595 x 21	1700	2830	20	5.3
20 x 25 x 1	495 x 622 x 21	1785	2975	20	5.5
24 x 24 x 1	595 x 595 x 21	2040	3400	24	6.4
12 x 24 x 2	289 x 595 x 45	1020	1700	14	8.8
16 x 20 x 2	395 x 495 x 45	1130	1880	18	9.4
16 x 24 x 2	395 x 595 x 45	1360	2265	18	11.3
16 x 25 x 2	395 x 622 x 45	1428	2380	18	12.4
18 x 24 x 2	444 x 595 x 45	1530	2550	21	13.2
20 x 20 x 2	495 x 495 x 45	1428	2380	24	12.5
20 x 24 x 2	495 x 595 x 45	1700	2830	24	15.0
20 x 25 x 2	495 x 622 x 45	1785	2975	24	15.7
24 x 24 x 2	595 x 595 x 45	2040	3400	28	17.6
12 x 24 x 4	289 x 595 x 95	1020	1700	8	9.4
16 x 20 x 4	395 x 495 x 95	1130	1880	9	9.2
16 x 24 x 4	395 x 595 x 95	1360	2265	9	11.1
16 x 25 x 4	395 x 622 x 95	1428	2380	9	11.5
18 x 24 x 4	444 x 595 x 95	1530	2550	10	12.1
20 x 20 x 4	495 x 495 x 95	1428	2380	12	12.0
20 x 24 x 4	495 x 595 x 95	1700	2830	12	14.4
20 x 25 x 4	495 x 622 x 95	1785	2975	12	15.0
24 x 24 x 4	595 x 595 x 95	2040	3400	16	19.8

Additional sizes available in the following diecut sizes:
14x20x1 25x25x1 12x12x1 14x25x1 16x16x1 18x25x1 15x20x2 25x25x2 12x20x2 16x16x2 18x25x2 30x30x4
Odd sizes can be custom fabricated accordingly
Width and height dimensions are interchangeable
Filters may be installed with the pleats either vertical or horizontal

IF International Filtration

CLYDE-IFC (S) PTE LTD

9 Joon Koon Road Singapore 628973 Tel: +65 6785 0700 Fax: +65 6785 1011
Email: sales@clyde.sg http://www.clyde.sg