Medical Vacuum Filters

Medical vacuum filters are specifically designed to protect the vacuum pump from liquid,solid and bacterial contamination.

Applications include

Dental

Medical

Veterinary

Airplus Filtration design and manufacture a comprehensive range of medical vacuum filters for centralized hospital vacuum plant installations as specified in the UK standard HTM2022.

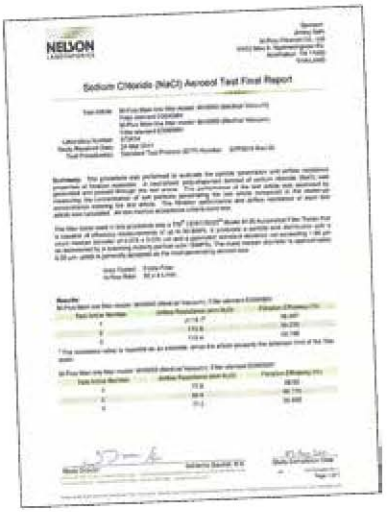
The Airplus ranges of medical vacuum filters are designed to protect these installations from liquid, solid and bacterial contamination. Liquids are collected in a transparent drain flask which can be easily removed for sterilization. Models MV020-MV500 incorporates the unique Airplus designed 'push-on' filter element.

This reduces maintenance time and allows the filter to be located in the most confined spaces.

The MV grade filter elements incorporate a pre filter and low pressure loss filter to remove solid and bacterial contamination.

They use high efficiency borosilicate glass microfibre media to remove all dirt particles. All elements include stainless steel metalwork and are fitted with an external pre filter layer of 80 p.p.i., open cell reticulated polyester foam. These filters are a proven success and now include such features as differential pressure indicators which are a specific requirement of the HTM2022 medical gas pipeline specification.

The efficiency of the installed filter elements exceeds the 0.005% penetration specified in HTM2022 for infectious disease unit, when tested in accordance with BS3928.


NELSON

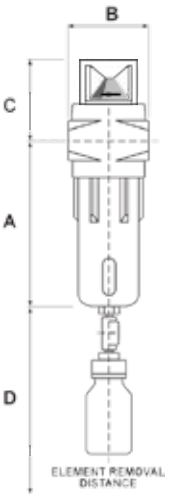
Sodium Chloride (NaCl) Aerosol Test Final Report

TSI® CERTITEST® Model 8130 Automated Filter Tester that is capable of efficiency measurements of up to 99.999%.It produced a particle size distribution with a count median diameter of 0.075 ± 0.020 µm and a geometric standard deviation not exceeding 1.86 µm as determined by a scanningmobility particle sizer (SMPS). The mass median diameter is approximately 0.26 µm, which is generally accepted as the most penetrating aerosol size.

Technical Specification

Filter Model	Pipe Size	Free Air Capacity at Atmospheric			Rarified Air Capacity at 500mm Hg Vacuum			Dimensions (mm)				Weight	Filter Element
		NL/min	Nm^3/h	scfm	NL/min	Nm^3/h	scfm	A	B	C	D	(Kg)	(Model x No.)
MV020	G ½"	200	12	7	600	36	21	194	89	60	120	1.1	EV020 x 1
MV055	G ¾"	550	33	19	1,650	99	58	251	120	100	120	2.4	EV055 x 1
MV120	G 1"	1,200	72	42	3,600	216	126	351	120	100	120	2.9	EV120 x 1
MV185	G 1½"	1,850	111	65	5,550	333	195	351	120	100	150	2.9	EV185 x 1
MV275	G 2"	2,750	165	96	8,250	495	288	441	162	109.5	150	6.6	EV275 x 1
MV335	G 2"	3,350	201	118	10,050	603	354	770	162	109.5	150	10.8	EV335 x 1
MV420	G 3"	4,200	252	147	12,600	756	440	509	200	123	200	12.5	EV420 x 1
MV500	G 3"	5,000	300	177	15,000	900	531	786	200	123	200	17.5	EV500 x 1

SPECIFICATION	MV	
Penetration to BS 3928	< 0.005%	
Maximum temperature	100°C	
Pressure loss-clean	30 mbar	0.44 psi
Pressure loss-change element	100 mbar	1.5 psi
Maximum working pressure	7 barg	100 psig
Maximum working vacuum	Full vacuum	
Element end cap colour	black	



TECHNICAL NOTES:

1. Direction of air flow is outside to in through the filter element.
2. Filtration Performance exceeds requirements of HTM2022. MV filter efficiency tested with a bacterial challenge test and BS3928 sodium flame test.
3. Low cost of ownership
4. Multiple port sizes for a given flow rate provides increased flexibility during installation
5. Corrosion protected
6. Internally and externally epoxy coated
7. Pop up indicators are fitted to model MV020 as standard. Differential pressure gauges are fitted to models MV055 to MV500 as standard.
8. Manual drain valves are fitted to models MV055 to MV500. Sterilisable glass drain flasks are supplied as standard, 100ml for models MV020 to MV120 and 150ml for MV185 to MV335 and 250ml for MV420 to MV500.
9. Pressure for leak testing purposes MUST be limited to 7 barg and only applied with the drain valve and drain flask REMOVED.
10. Filter elements should be changed every 6 months / 1000 hours (whichever comes first).