

# M-VAC SERIES

## MEDICAL VACUUM FILTERS

operating pressure	<b>20 to 2000 mbar(abs)</b>
volume flow rate	<b>7,5 to 787 Nm<sup>3</sup>/h</b>
connections	<b>3/8" to DN150</b>
operating temp. range	<b>1,5 to 65 °C</b>
standard colour	<b>RAL 9003</b>

### APPLICATIONS

- operating theatres
- maternity units
- dental applications
- pathology laboratories
- pharmaceutical applications
- mortuary and post-mortem rooms

### DESCRIPTION

M-VAC filters are designed for medical vacuum applications. They are optimised for high-efficient removal of bacterial and other contamination (solids and liquids) from the suction side of vacuum pumps preventing damage to the pump and the potential biological infection of the surrounding environment. Removed liquids are collected in a transparent flask which can be removed for sterilisation.

The efficiency of the installed filter elements exceeds the 0,005% penetration specified in HTM 2022 for infectious disease units, when tested in accordance with BS 3928.

### FEATURES

- Anodised Internals
- Compact Design
- Spanner Hex on Filter Bowl
- Includes Differential Pressure Gauge
- Includes Ball Valve & Drain Flask



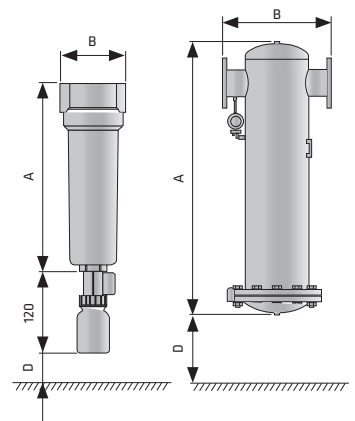
 NATIONAL FILTERS PTY LTD  
 TEL: 1300 DRY AIR  
 www.nationalfilters.com.au

Filter Type	M-VAC 0188 T
Filter Element	
Max. pressure	2000 mbar
Flow rate	0.7 - 787 m <sup>3</sup> /h
Max. temperature	65 °C

VAC



TECHNICAL DATA								FILTER ELEMENTS
Filter model	Pipe size	Free air capacity at atmospheric pressure		Dimensions mm (SET10)			Mass	VAC
	inch	Nm <sup>3</sup> /h	scfm	A	B	D	kg	
M-VAC 0056	3/8"	7,5	4	187	88	60	0,7	06050
M-VAC 0076	1/2"	9,8	6	187	88	60	0,7	07050
M-VAC 0106	3/4"	15,0	9	257	88	80	0,8	14050
M-VAC 0186	1"	24,8	15	263	125	100	1,8	12075
M-VAC 0306	1"	41,9	25	363	125	120	2,5	22075
M-VAC 0476	1 1/2"	63,8	38	461	125	140	2,5	32075
M-VAC 0706	1 1/2"	97,5	57	640	125	160	3,2	50075
M-VAC 0946	2"	125	74	684	163	520	5,1	51090
M-VAC 1506	2"	187,5	110	935	163	770	7,1	76090
M-VAC 1756	2 1/2"	210	124	935	163	770	6,9	76090
M-VAC 2006	3"	270	159	795	240	630	12,9	51140
M-VAC 2406	3"	345	203	1000	240	780	14	75140
M-VAC B240	DN80	275	162	1170	450	650	61	1x 76090
M-VAC B300	DN100	394	232	1340	560	650	115	2x 76090
M-VAC B450	DN125	587	345	1340	560	650	123	3x 76090
M-VAC B600	DN150	787	463	1425	620	650	178	4x 76090
pressure drop - new element-dry [mbar / psi]								30 / 0,45
filter media								borosilicate micro fibres
min. operating temperature (°C / °F)								1,5 / 35
max. operating temperature (°C / °F)								65 / 149



CORRECTION FACTORS													
Absolute pressure [bar]	1	0,9	0,8	0,7	0,6	0,5	0,4	0,3	0,2	0,1	0,05	0,02	
Absolute pressure [psi]	14,7	13	11,6	10,2	8,7	7,3	5,8	3,3	2,9	1,45	0,73	0,29	
Correction factor	1	0,9	0,8	0,7	0,6	0,5	0,4	0,3	0,2	0,1	0,05	0,02	

• To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor.

# MEDICAL VACUUM FILTERS - M-VAC

## DESCRIPTION

M-VAC filters have been specifically developed for medical vacuum applications. These filters are optimised for high-efficient removal of bacterial and other contamination (solids and liquids) from the suction side of vacuum pumps preventing damage to the pump and the potential biological infection of the surrounding environment. Removed liquids are collected in a transparent flask which can be removed for sterilisation.

The efficiency of the installed filter elements exceeds the 0,005% penetration specified in HTM 2022 for infectious disease units, when tested in accordance with BS 3928.



## APPLICATIONS<sup>(1)</sup>

- Operating theatres
- Maternity units
- Dental applications
- Pathology laboratories
- Pharmaceutical applications
- Mortuary and post-mortem rooms

<sup>(1)</sup>M-VAC filter housing can be used in variety of applications. For applications not listed please contact us or your local dealer.

## TECHNICAL SPECIFICATION

Operating temperature	1,5 - 65 °C	35 - 149 °F
Operating pressure	20 - 2000mbar(abs)	0,29 – 29 psi
Initial pressure drop	30mbar	0,45 psi

## MATERIALS

Housing material	Aluminum
Fittings, Screws	Brass, Brass-zinc plated, Steel
Cover	ABS
Sealing	NBR
Corrosion protection	Anodized
Outside protection	Powder paint coated (Epoxi-polyester base)
Lubricant	Shell cassida grease RLS 2
Filter media	Borosilicate micro fibers,
Drainage media	Polyester
Support (inner-outer)	Stainless Steel 1.4301
Bonding	Polyurethane
Endcaps	PA6 with 30% glass fibers
Sealing	NBR



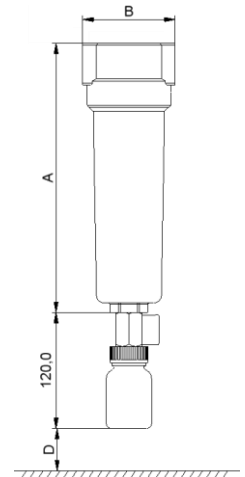
**SIZES**

FILTER HOUSING	PIPE SIZE [inch]	FILTER ELEMENT	Capacity <sup>(2)</sup>		DIMENSIONS [mm]			VOLUME [l]	WEIGHT [kg]
			[Nm <sup>3</sup> /h]	[scfm]	A	B	D		
M-VAC 0056	3/8"	06050 VAC	7,5	4	187	88	60	0,47	0,7
M-VAC 0076	1/2"	07050 VAC	9,8	6	187	88	60	0,47	0,7
M-VAC 0106	3/4"	14050 VAC	15,0	9	257	88	80	0,6	0,8
M-VAC 0186	1"	12075 VAC	24,8	15	263	125	100	1,57	1,8
M-VAC 0306	1"	22075 VAC	41,9	25	363	125	120	2,2	2,5
M-VAC 0476	1 1/2"	32075 VAC	63,8	38	461	125	140	2,8	2,5
M-VAC 0706	1 1/2"	50075 VAC	97,5	57	640	125	160	3,9	3,2
M-VAC 0946	2	51090 VAC	125,0	74	684	163	520	6,0	5,1
M-VAC 1506	2	76090 VAC	187,5	110	935	163	770	8,2	7,1
M-VAC 1756	2 1/2"	76090 VAC	210,0	124	935	163	770	14,0	6,9
M-VAC 2006	3"	51140 VAC	270,0	159	795	240	630	20,0	12,9
M-VAC 2406	3"	75140 VAC	345,0	203	1000	240	780	24,4	14,0
M-VAC B240	DN80	76090 VAC (x1)	275,0	162	1170	450	650	39,0	61,0
M-VAC B300	DN100	76090 VAC (x2)	394,0	232	1340	560	650	103,0	115,0
M-VAC B450	DN125	76090 VAC (x3)	587,0	345	1360	560	650	104,0	123,0
M-VAC B600	DN150	76090 VAC (x4)	787,0	463	1425	620	650	133,0	151,0

<sup>(2)</sup>Free air capacity at atmospheric pressure

**PRESSURE EQUIPMENT DIRECTIVE PED 97/23/CE (Fluid group 2)**

M-VAC 0056 - M-VAC 0476	Not required
M-VAC 0706 - M-VAC 1506	Category 1, Module A
M-VAC 1756 - M-VAC 2406	Category 2, Module H



**CORRECTION FACTORS**

- To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor C<sub>1</sub>.
- To select a filter to match system flow conditions, multiply the system flow by the correction factor C<sub>2</sub> that corresponds to vacuum in the pipe.


**OPERATING PRESSURE**

[bar] absolute	1	0,9	0,8	0,7	0,6	0,5	0,4	0,3	0,2	0,1	0,05	0,02
[psi] absolute	14,7	13	11,6	10,2	8,7	7,3	5,8	3,3	2,9	1,45	0,73	0,29
C <sub>1</sub>	1	0,9	0,8	0,7	0,6	0,5	0,4	0,3	0,2	0,1	0,05	0,02
C <sub>2</sub>	1	1,1	1,25	1,43	1,67	2	2,5	3,33	5	10	20	50

**MAINTENANCE**

Replace filter element every 6 months or follow the instructions for specific filter element. Change the sealing when you disassemble filter housing. Once per year make a visual check of filter housing and make sure there is no visual damage. Flask can be sterilised at 140°C.

INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE

	Our quality management system is certified by BUREAU VERITAS in conformity with ISO 9001:2008 Reg. number: 200285
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