

**mdi FilterMax** equipment facilitates precise calculation of filter size and helps in selecting the most suitable filtration train (Pre-filter - Final filter Combination) for a process fluid. It is a latest cutting-edge technology equipment which is flexible and compact in design and gives reliable results with great ease.

It effectively addresses filter selection and sizing, a key concern for managers in formulation and process development labs and manufacturing processes in pharmaceutical and biopharmaceutical industries.

**mdi FilterMax** uses specially designed software application in combination with compact table top hardware assembly to carry out sample filtration through membranes or pre-fabricated devices. Wireless and automatic recording of flow decay at constant pressure at a specified Interval is done in a Tablet computer. It automatically calculates the filter size keeping into consideration various process parameters such as batch volume, batch time and minimum acceptable flow rates. The results thus obtained can be used to select the most suitable filtration train with maximum throughput.



### Filter Selection Kit

**mdi** offers a specially designed filter selection kit for users in formulation and process development labs in the pharmaceutical and bio pharmaceutical industries.

It offers five or ten different types of 50mm inline filters ranging from 0.2 µm sterilizing grade filters of different membrane material of construction (MOC) to microglassfiber and polypropylene pre filters. These ready to use devices are scalable to 30" capsule filter with 1.8m<sup>2</sup> effective filtration area with similar material of construction.

The 50mm vented inline filters are available with sanitary flange end connection to be used with MDI FilterMax which is an automated filter selection and sizing equipment. The 25mm sanitary flange connection fits on a specially designed pressure vessel for throughput studies at constant pressure.

However, 50 mm filter devices are also available with 1/4"-3/8" stepped hose barb connections in case **mdi FilterMax** is not available with the user.

The user can choose 5 or 10 different filters from the following options:

Filter Type	Pore Size	Catalog No.
Microglassfiber filter	0.7µm	VGSX1041SSXX102
Microglassfiber filter	2 µm	VGSX1015SSXX102
Microglassfiber filter	6 µm	VGSX1025SSXX102
PP Membrane filter	1 µm	VPFX1005SSXX102
PP Membrane filter	2.5 µm	VPFX1006SSXX102
PP Membrane filter	5 µm	VPFX1007SSXX102
PP Membrane filter	10 µm	VPFX1008SSXX102
PES Membrane filter with Microglassfiber prefilter	0.2 µm	VGKX1001SSXX102
PES Membrane filter with Microglassfiber prefilter	0.5µm	VGKX1004SSXX102
PES Membrane filter	0.2µm	VKSX1001SSXX102
Nylon Membrane filter	0.2µm	VNSX1001SSXX102
Hydrophilic PVDF Membrane filter	0.2µm	VWSX1001SSXX102

### Applications

1. For selection of most efficient filtration train and most effective combination of serial filtration layers at R&D and process development stage.
2. To calculate the most optimum filter size for a process fluid fulfilling the desired process parameters.
3. Improving existing filtration systems for better economies and increased throughput.
4. To test the filterability of incoming raw materials to ensure desired throughputs from established filtration systems.

### Hardware Features

- ◆ Compact design facilitates usage in enclosed work spaces such as LAF and negative pressure fume hoods (for hazardous fluids) and saves valuable laboratory shelf space.



## Software Features

- ◆ Simple and easy to use with touch screen interface.
- ◆ Structured menu based User interface.
- ◆ Multiple test modes including an Intuitive “Auto mode” taking care of pore plug mechanism and flow decay parameter minimizing the expertise required for users.
- ◆ Wireless transmission of data from weighing scale to tablet computer makes it convenient to use and provides flexibility to move around.
- ◆ Automatically calculates throughput of test filter, and the filtration area required to filter the desired volumes.

## Report Generation and Management

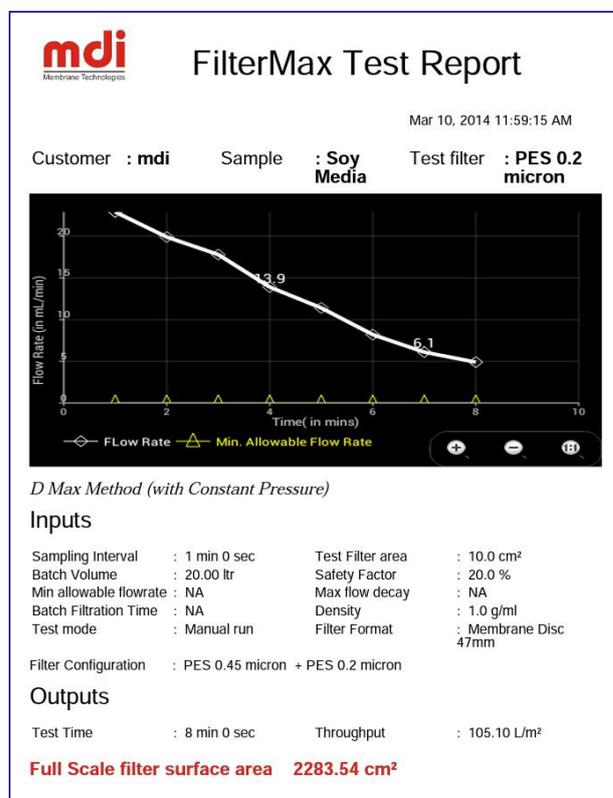
- ◆ All test results are saved automatically and report can be generated for each successful test run for later reference.
- ◆ The test report is saved in pdf format in the Tablet computer. It provides real time graph (flow rate vs time), data entered and results.
- ◆ Reports can be emailed, transferred to a PC and printed.

## Components

- ◆ 3 Liter, SS 316L Pressure Vessel with gauge
- ◆ Table Top Compressor Pump
- ◆ 3 kg Weighing balance with wireless connectivity
- ◆ 7" Handheld Tablet Computer with preloaded FilterMax Application Software
- ◆ Complete assembly components such as tubing, clamps and ON/OFF valve

The screenshot shows the FilterMax software interface with the following parameters:

- Options: mdi FilterMax
- Study Parameters: Customer: mdi, Sample: Soy Media, Test Filter: AseptiCap KS 0.2u
- Test filter Parameters: Filter Format: Membrane Disc 47mm, Filter Configuration: Single Layer (unselected), Double Layer (selected), Triple Layer (unselected), Filter MOC/Pore size: PES 0.45 micron, PES 0.2 micron, Test Filter Size: 10 cm<sup>2</sup>, Solution Density: 1.0 g/ml



## Ordering

Please contact your local mdi representative or contact us at below mentioned contact details for any queries.

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