

# MicroGard® II specifications

Vyntus™, JAEGER® MasterScreen, Vmax® and Micro Medical pulmonary instruments have been validated using MicroGard® filters.



## Filtering properties

Bacterial 99.999% (based on Nelson Lab test<sup>1</sup>)

Viral 99.999% (based on Nelson Lab test<sup>1</sup>)

## Filtering material

### Material name: Microstat M190

Filtering layer density (filtering material and three layers scrim) (258 ± 11%) g/m<sup>2</sup>

Filtering layer thickness 3.0 ± 0.5 mm

Filtering layer mass 1.3 ± 0.2 g

Filtering layer diameter (effective) 80 ± 0.5 mm

Filtering layer surface (effective) (50.2 ± 1.2%) cm<sup>2</sup>

## Filter mass: housing and filter material

MicroGard IIB	MicroGard IIC
(38 ± 10%) g	(42 ± 10%) g

## Filter dimensions

Filter volume (excluding adapters and housing) (55 ± 3%) mL

Connection inner diameter system side (30 ± 2%) mm tapered port

Connection outer diameter patient side (30 ± 2%) mm tapered port (MicroGard IIC only)

## Filter ambient conditions

Temperature 0–42°C  
32–108°F

Relative humidity (noncondensing) 0–100%

## Materials

Materials and additives compliant with: REACH regulations

Housing (with mouthpiece) Styrolution PS 454N

Bis(2-ethylhexyl) phthalate (DEHP)

Filter does not contain: Bisphenol A (BPA)

Polyvinyl chloride (PVC)

## Filter resistance at various flows: MicroGard IIB (± 4%)

L/s	L/min	kPa.s/l	cmH <sub>2</sub> O
0.50	30	0.034	0.35
1.00	60	0.036	0.37
1.67	100	0.039	0.39
5.00	300	0.051	0.52
8.33	500	0.063	0.64
10.0	600	0.069	0.71
11.7	700	0.075	0.77
14.0	840	0.084	0.86
<b>14.0</b>	<b>840</b>	<b>ATS<sup>2</sup> max: 0.150</b>	<b>ATS<sup>2</sup> max: 1.53</b>

## Filter resistance at various flows: MicroGard IIC (± 4%)

L/s	L/min	kPa.s/l	cmH <sub>2</sub> O
0.50	30	0.034	0.34
1.00	60	0.035	0.36
1.67	100	0.037	0.38
5.00	300	0.046	0.47
8.33	500	0.054	0.56
10.0	600	0.059	0.60
11.7	700	0.063	0.65
14.0	840	0.069	0.71
<b>14.0</b>	<b>840</b>	<b>ATS<sup>2</sup> max: 0.150</b>	<b>ATS<sup>2</sup> max: 1.53</b>




## REFERENCES

1. Nelson Report 10003754 - Viral Filtration Efficiency Test (VFE) at an Increased Challenge level GLP Report Nelson Report 10003754 - Bacterial Filtration Efficiency Test (BFE) at an Increased Challenge level GLP Report.
2. ATS Standardization of Spirometry [ATS 2005, p. 332]

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