



Date: 03 March 2020

## Product Reference

- Pleated HEPA Filters' product code: 4020/03, 4244/01, 4244/701, 4244/702, 3000/04
- HME Filters' product code: 4333/711, 4333/761, 9066/01, 9066/711, 9080/100
- Bacterial Filters' product code: 4222/03, 4222/701, 4222/703
- Spirometer Filters' product code: 2800/21, 2800/22, 2800/728, 2800/10
- Smoke Filters' product code: 2200/47
- Vent Filters' product code: 2000/39
- Suction Filters' product code: 2200/16

## Dear valued customers,

GVS Filter Technology offers a range of HMEF and HEPA for use within Anesthesia, Respiratory and Critical areas, indicated for use within patients whose upper airways are being bypassed by an artificial tracheal airway or receiving artificial ventilator support. This removes the patient's ability to filter and humidify inspired gases. Medical gases are much colder and dryer than those, which we would normally breathe so the problem is exacerbated during Anesthesia and Ventilation.

The hospital environment is increasingly a potential source of infection and with the increased incidence of infectious diseases the possibility of cross contamination due to the reuse of equipment or the sharing of equipment is a real risk. GVS MAF is able to offer different types of filtration solutions for the protection of patients and equipment in the medical fields.

Coronavirus disease-2019 (COVID-2019), MERS-Coronavirus (MERS-CoV) and SARS-Coronavirus (SARS-CoV) are causing infections in several countries worldwide. Especially, these viruses spread among in the Middle East and the East Asia.

We have not specifically validated our filters for removal of the COVID-2019, MERS-CoV and SARS-CoV. However GVS' HMEF and HEPA filters are tested at Nelson Laboratories passing BFE(Bacterial Filtration Efficiency) and VFE (Viral Filtration Efficiency) test using Staphylococcus Aureus (\*ATCC #6538) and



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bacteriophage PHI X174(\*Dimension about 0.025  $\mu\text{m}$ ) resulting an effective barrier against bacteria and viruses (Documents available on the request).

Numerous these reports have shown that GVS HMEF and HEPA filters serve as a complete barrier to contaminated body fluids and have been validated to removal a range of clinically relevant bacteria and viruses, including, but not limited to Influenza A virus(H1N1: 0.08-0.12  $\mu\text{m}$ ), HIV(0.08  $\mu\text{m}$ ), Hepatitis C virus(0.8  $\mu\text{m}$ ), Adenovirus (0.07  $\mu\text{m}$ ), Cytomegalovirus(0.1  $\mu\text{m}$ ), Orthomyxovirus(0.12  $\mu\text{m}$ ) and Mycobacterium tuberculosis(1.0  $\mu\text{m}$ ). COVID-2019, MERS-CoV and SARS-CoV are Coronavirus species and its size ranges from 0.06 to 0.2  $\mu\text{m}$ . Therefore, we believe that our filters may prevent those of viruses.

We hope this statement have answered your questions.

Thank you and Best regards,

Andrea Russo

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