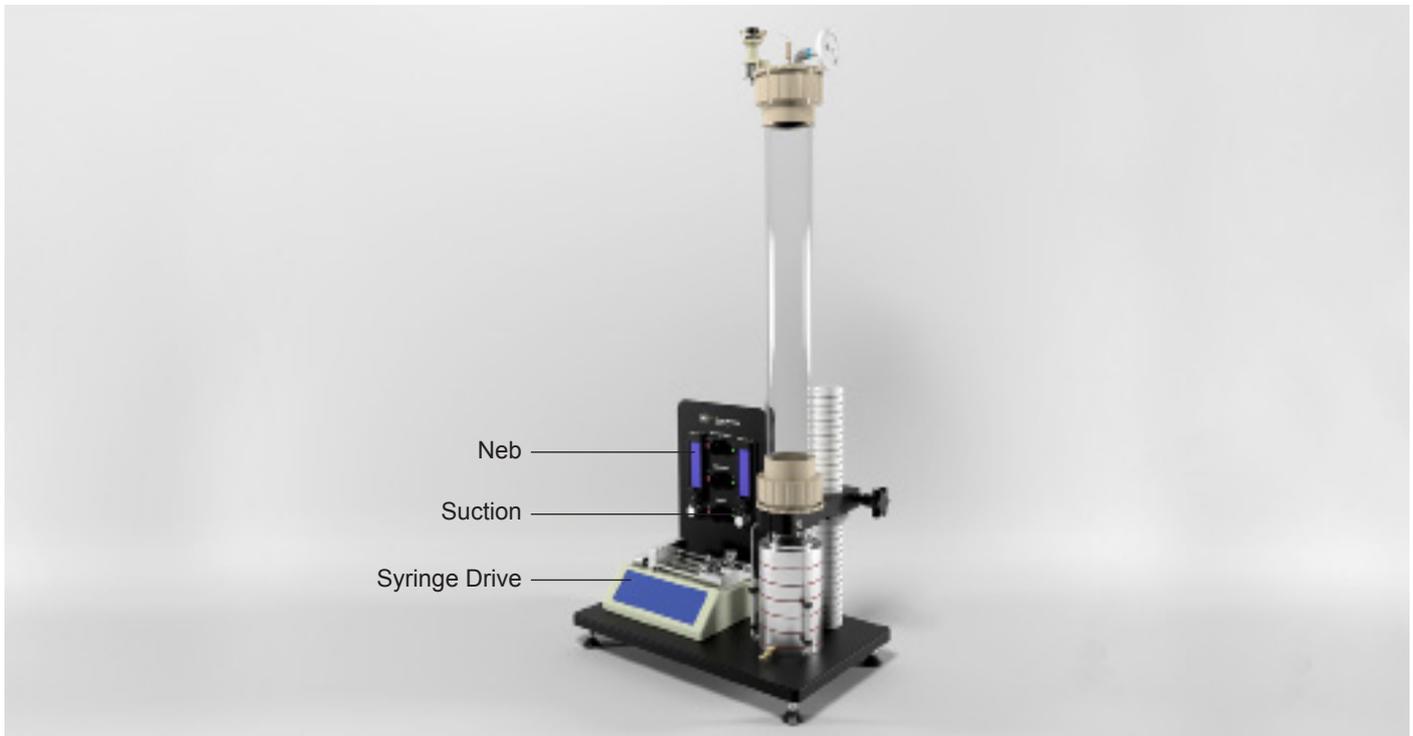


# Bacterial Filtration Efficiency (BFE) Testing System



*BFE apparatus with nebulizer, aerosol chamber and stand, syringe drive, pneumatic control panel with digital flow meters, cascade impactor, vacuum pump and petri dishes.*

The advent of COVID-19 has highlighted the need for effective Personal Protective Equipment (PPE). Ensuring PPE is effective and meets international standards of performance is vital to the health and safety of medical staff on the front-line and other first responders.

Glass Expansion has developed a Bacterial Filtration Efficiency (BFE) testing apparatus for Surgical Masks (SM) in consultation with a Government Analytical testing agency.

European Union, US FDA and Australian TGA authorities require face masks used in medical procedures to limit the transmission of infectious agents by 98% according to ISO EN 14683/ASTM F2101 Bacterial Filtration Efficiency (BFE) rating.

The BFE test apparatus from Glass Expansion is compatible with ISO EN 14683/ASTM F2101 test methods, delivering an aerosol of Staphylococcus aureus solution with a  $3 + 0.3$  micron mean particle size, through a 600mm long glass aerosol chamber at 28.3 L/min (1 CFM) flow rate into a 6-stage cascade impactor equipped with agar plates for particle sizing and quantitation. The test is designed to simulate and quantify the size distribution of the bacteria that penetrates the surgical mask and deposits in the human respiratory tract.

## The Glass Expansion Surgical Mask BFE apparatus features:

- A high precision syringe pump to accurately deliver bacterial challenge solution at 10 µL/min flow rate
- Robust, efficient glass concentric nebulizer produces an aerosol with narrow particle distribution
- The 80mm x 600mm glass aerosol chamber with inert end caps
- A MicroJet Array air inlet system shapes the nebulizer plume to eliminate droplet deposition on the aerosol chamber wall improving transport efficiency of the aerosol
- Prime valve to simplify changeover of the challenge and blank solutions
- Replaceable HEPA filtered air supply provides bacteria-free air
- Stable, easy to use, mount simplifies mask change-over between tests improving productivity
- Accurate, electronic flow meters on the air flow for reproducible long-term testing conditions
- Inert autoclavable materials allows thorough cleaning to prevent cross-contamination

## Ordering Information

Part Number	Description
KT-1188	<b>Surgical Mask BFE Test Assembly consists of:</b>
	Nebulizer
	Aerosol Chamber
	Priming valve
	Syringe Pump for precision delivery of Challenge Solution
	Stand Assembly with Quick Release mechanism
	High Precision Syringe Drive Pump
	Pneumatic Module with Digital Flow Meters
	6 Stage Cascade Impactor with vacuum pump
	6 covered petri dishes

For more information contact Glass Expansion on [enquiries@geicp.com](mailto:enquiries@geicp.com)



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