



FACE MASK LEAKAGE TESTER

Face Mask Leakage Tester ToronFM™ LT is designed to measure particulate leakage rates (TIL and IL) for masks, full-face respirators, breathing apparatuses, and gas masks.

FEATURES

- **Salt Aerosol Generator:** Equipped with a salt aerosol generator for precise particle distribution.
- **Sealed Chamber Design:** Constructed from stainless steel with an anti-corrosion finish, the chamber includes a visual structure with glass windows on three sides and a sealed door that opens from both sides.
- **Airflow System:** Features a diffused air inlet at the top of the chamber with a cone-angle design. The air outlet, located opposite the inlet, is fitted with a filter to purify outgoing air.
- **Dual Photometers:** Simultaneously measure particle concentrations upstream and downstream.
- **Control Box:** The control box is independent and housed in a metal enclosure with a powder-coated finish.
- **Integrated Control System:** The detection and control system is based on a PC-integrated solution for seamless operation.

THEORY & METHOD

Principle

The system uses an oil or salt aerosol generator to introduce particles into a test chamber via compressed air. The flow rate of the generator or compressed air can be adjusted to control the particle concentration in the chamber. Two photometers measure the particle concentration inside and outside the mask simultaneously. The software processes this data to generate results.

The aerosol generator operates in a switchable mode and is manually controlled, without any electronic system. When testing to meet European standards, a European sampler is used. During testing, the operator performs specified actions, such as walking or running on a treadmill, to assess leakage.

TECHNICAL SPECIFICATIONS

Model	ToronFM™ LT	
Environmental Requirement	Working Temperature	(20±5)°C
	Humidity	≤60%
	Used Space	≥4000×5000×3000mm, water in/drain pipe, room with good ventilation
Walked-in Testing Room	Inner Effective Size	1800mm×1500mm×2100mm (L×W×H)
	Outer Size of Testing Room	1950mm×1650mm×2500mm (L×W×H)
	Control Cabinet	700mm×700mm×1600mm (L×W×H)
Environmental Analog Detection System	Particle Aerosol Concentration	(10±1) mg/m³
	Aerodynamic Size Distribution of Particle	(0.02~2) μm
	Mass Median Diameter	About 0.6 μm
	Concentration Variation in Effective Space	≤10%
	Occurrence Amount	≥100L/min
Particle Concentration Detector	2 Sets	
	Dynamic Range	(0.001~200) mg/m³
	Accuracy	±1%

Model	ToronFM™ LT	
Response Time	≤500 ms	
Horizontal Pedal Drive Test-bed	Running Speed	(5±0.5) km/h
Other Accessories	Air duct circulation and maintenance of cleaning equipment	



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