



TORONTECH



FACE MASK NON- POWER AIR-PURIFYING PARTICLE RESPIRATORY PROTECTIVE TESTER

Face Mask Non-power Air-purifying Particle Respiratory Protective Tester ToronFM™ PRPT measures the CO₂ concentration in inhaled air to ensure the mask's dead space is effectively protected.

Standard

1. BS EN 149: 2001 + A1: 2009 7, 12

APPLICATIONS

The Torontech ToronFM™ PRPT is a specialized instrument designed to perform the critical test for carbon dioxide (CO₂) accumulation, also known as the dead space test, in accordance with standards like EN 149. Its primary application is to determine how effectively a respirator clears exhaled air, preventing the dangerous re-breathing of CO₂. This is a fundamental safety and performance test, essential for ensuring a respirator does not cause hypercapnia and is safe for extended use.

This critical safety test is indispensable for the certification and development of:

- **Respirator Manufacturing:** As a mandatory quality control and lot release test for manufacturers of half-mask and full-face respirators, ensuring that their products meet the stringent CO₂ clearance requirements of their claimed safety classifications (e.g., FFP1, FFP2, FFP3).
- **Third-Party & Government Certification:** For regulatory bodies and accredited test labs to independently verify that respirators on the market meet national and international occupational health and safety standards for CO₂ content, which is a critical life-safety parameter.
- **Personal Protective Equipment (PPE) R&D:** As a primary research tool for designing new respirators, especially those with novel geometries or valve systems, to ensure that design choices effectively minimize dead space and promote the efficient clearance of exhaled air.

- **Industrial Safety & Occupational Health:** For organizations in sectors like mining, chemical manufacturing, and firefighting to perform validation and quality assurance, verifying that the respirators provided to their workforce offer the necessary protection against CO₂ build-up during strenuous work.

FEATURES

- The device features a color touch screen with support English interfaces, offering a user-friendly menu-style navigation.
- Equipped with three advanced carbon dioxide sensors, it monitors CO₂ levels and automatically calculates test results.
- Its dual-breathing simulator replicates the human breathing sine wave curve with precision.
- High simulation head mold.

TECHNICAL SPECIFICATIONS

Model	ToronFM™ PRPT
Frequency of breathing simulator	10~40 times/min
Range of tidal volume	0.5~3.0L/min
Volume fraction of CO ₂	5.0±0.1%
Carbon dioxide flowmeter range	50L/min, resolution is 1L/min
Exhalation carbon dioxide analyzer range	20%, resolution: 0.1%
(Inhalation, air) carbon dioxide analyzer range	5%, resolution: 0.01%
Air speed of fan	0.5m/s
Dimensions (L × W × H)	820mm × 520mm × 1380mm
Weight	60kg

Voltage	AC220V 50Hz, 1000W (110V is also available)
Standards	1. BS EN 149: 2001 + A1: 2009 7, 12

Standard Accessories	1 Set	Main Unit
	1 Set	Medium headmold (GB2626, GB2890)
	1 Set	Electric fan
Optional Accessories	1 Set	Air duct
	1 Set	Small head mold (GB2626, GB2890)
	1 Set	Large headmold (GB2626, GB2890)
	1 Set	Sheffield headform (EN 149:2001+A1:2009)
	1 Set	Headmold (No. 1) (ISO 16900-5:2016 and ISO 16900-5:2016/Amd.1:2018)
	1 Set	Headmold (No. 2) (ISO 16900-5:2016 and ISO 16900-5:2016/Amd.1:2018)
	1 Set	Headmold (No. 3) (ISO 16900-5:2016 and ISO 16900-5:2016/Amd.1:2018)
	1 Set	Headmold (No. 4) (ISO 16900-5:2016 and ISO 16900-5:2016/Amd.1:2018)
	1 Set	Headmold (No. 5) (ISO 16900-5:2016 and ISO 16900-5:2016/Amd.1:2018)



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