

WIDE-RANGE MORTAR AIR ENTRAINMENT METER



Wide-Range Mortar Air Entrainment Meter - ToronMAM™ WR

ToronMAM™ WR is a precision direct-reading mortar air content meter that integrates German sensing technology for high-accuracy measurement of entrained air in fresh mortar mixes. Designed specifically for ordinary mortar and CA mortar applications, this instrument offers an exceptionally wide measurement range of 0% to 100% — making it one of the most versatile mortar air testers available for use across diverse mortar types and mix specifications.

Built from a magnesium-aluminum-silicon alloy body with a dustproof, waterproof, and explosion-proof pressure gauge, the ToronMAM™ WR is engineered for demanding field conditions where standard instruments may fall short. The press-type snap buckle closure provides a fast, secure seal on the 1-liter bowl, and the instrument weighs approximately 6 kg — balancing durability with portability. For laboratories and construction teams working with a wide range of mortars, this air meter offers the precision and range needed for comprehensive air content verification.

APPLICATIONS

Wide-Range Mortar Air Entrainment Meter - ToronMAM™ WR Applications

The ToronMAM™ WR mortar air content meter is suited for a wide range of mortar types and construction applications:

- Ordinary mortar QC: air content verification for standard cement-lime and cement-sand mortar mixes
- CA mortar applications: specialized air content testing for calcium aluminate and controlled-air mortar products
- Masonry construction: routine air entrainment checks for Type S, N, and M mortars in brick and block work
- Plastering and stucco systems: air content verification for multi-coat plaster applications
- Specialty admixture-modified mortars: wide measurement range accommodates high-air-content experimental mixes
- Prepackaged mortar production: plant-level quality assurance for bagged and bulk mortar products
- Research and mix design laboratories: broad range mortar air tester for formulation studies and admixture trials



FEATURES

Wide-Range Mortar Air Entrainment Meter - ToronMAM™ WR Key Features

The ToronMAM™ WR precision mortar air tester is built with a full set of features suited to demanding mortar air content testing in field and laboratory environments:

- German sensing technology: high-precision, stable pressure measurement across the full 0% to 100% measurement range
- Direct-reading design: immediate air content percentage readout, no curves or manual calculations required
- Wide measurement range of 0% to 100%: covers standard, high-air, and specialty mortar mix specifications
- Applicable to ordinary mortar and CA mortar: broad mix type compatibility in a single instrument
- Graduated accuracy: $\pm 0.1\%$ (0%–5%), $\pm 0.15\%$ (6%–20%), $\pm 0.2\%$ (21%–100%)
- Dustproof, waterproof, and explosion-proof pressure gauge: built for demanding field and industrial environments
- Magnesium-aluminum-silicon alloy body: lightweight yet durable construction for long service life
- Press-type snap buckle: fast, secure bowl sealing for quick test setup on busy sites
- 1-liter bowl volume: appropriate for mortar sample size per standard test protocols
- Approximately 6 kg instrument weight: portable enough for field use, substantial enough for stable bench testing

THEORY & METHOD

Theory and Method

The ToronMAM™ WR operates on the direct-reading pressure method for determining entrained air content in fresh mortar. The mortar sample is placed in the sealed 1-liter bowl and the press-type buckle is secured. Air pressure is then applied to the chamber above the sample. When the equalization valve is opened, the pressurized air compresses the entrained air voids within the mortar, and the resulting pressure change is read directly from the gauge as a percentage of air content — no charts, no curve plotting, and no additional calculation steps.

The German sensing technology at the core of this mortar air meter delivers stable, high-sensitivity pressure readings across the instrument's full 0% to 100% measurement range. Graduated accuracy tiers — $\pm 0.1\%$ for 0%–5%, $\pm 0.15\%$ for 6%–20%, and $\pm 0.2\%$ for 21%–100% — ensure that results remain meaningful and trustworthy across both low and high air content mortar mixes. Note that the pressure gauge does not support MPa-unit testing and is calibrated exclusively for percentage-based air content readout.

TECHNICAL SPECIFICATIONS

Wide-Range Mortar Air Entrainment Meter – ToronMAM™ WR Technical Specifications

Parameter	Specification
Model	ToronMAM™ WR
Bowl Volume	1 L (1,000 mL)
Air Content Range	0% - 100%
Accuracy (0%–5% range)	$\pm 0.1\%$
Accuracy (6%–20% range)	$\pm 0.15\%$
Accuracy (21%–100% range)	$\pm 0.2\%$

Parameter	Specification
Pressure Gauge Type	Dustproof, waterproof, explosion-proof
Pressure Gauge Note	MPa display not supported; percentage readout only
Sensing Technology	German technology
Main Unit Material	Magnesium-aluminum-silicon alloy
Bowl Closure Type	Press-type snap buckle
Applicable Mortar Types	Ordinary mortar, CA mortar
Instrument Weight	Approximately 6 kg
Test Type	Direct-reading (pressure method); high precision



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