



PRECIOUS METAL PURITY-KARAT DENSITY TESTER

The TTDS-PM-Karat Precious Metal Purity Tester is a professional-grade solution for the non-destructive analysis of gold, silver, and platinum. Built in strict accordance with ASTM D297 standards, this industrial density tester utilizes the Archimedean principle to determine the exact karat value and purity of precious metal alloys. By measuring the specific gravity of the entire sample rather than just the surface, the device provides a comprehensive assessment that is essential for gold refining, recycling operations, and laboratory quality control.

Engineered for high-stakes environments, this digital karat tester is a critical asset for the jewelry industry, the banking sector, and pawn shops. It enables professionals to verify the authenticity of precious metal assets for financial transactions and ensure transparent, fair pricing during trade. With three specialized models—TTDSPrecMetIII, V, and XII—the series supports a wide range of sample weights from 5g to 1200g, making it a versatile tool for everything from intricate jewelry pieces to substantial bullion bars.

The TTDS series delivers exceptional measurement accuracy, featuring a density precision of 0.001g/cm^3 and a display range reaching 24K and 100% purity. Its streamlined operation allows for rapid, standardized testing without damaging the material, ensuring both operational efficiency and sample integrity. For organizations requiring a reliable, compliant, and easy-to-use analyzer, the TTDS-PM-Karat stands as the industry standard for precise precious metal verification and purity assessment.

APPLICATIONS

- **Jewelry Industry** – Accurately measures karat value and purity of gold, silver, platinum, and other precious metals.
- **Banking Sector** – Verifies authenticity and quality of precious metals for financial transactions.
- **Pawn Shops** – Provides quick and reliable testing to determine the value of jewelry and precious items.
- **Gold Refining and Recycling** – Confirms metal purity during refining, processing, and recycling operations.
- **Precious Metal Trading** – Ensures accurate assessment of weight, density, and purity for fair pricing.
- **Quality Control and Compliance** – Meets ASTM D297 standards for reliable and standardized testing.

THEORY & METHOD

Precious Metal Purity-Karat Density Tester Designed according to Archimedean principle; it tests the whole sample and accordingly the density of sample to judge the karat and purity of gold.

Standard: ASTM 297

TECHNICAL SPECIFICATIONS

Model	TTDSPrecMetIII	TTDSPrecMetV	TTDSPrecMetXII
Sample range	5~300g	5~500g	5~1200g
Density precision	0.001g/cm3		
Karat precision	24K or 24.0K		
Purity precision	100% or 100.0%		



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

