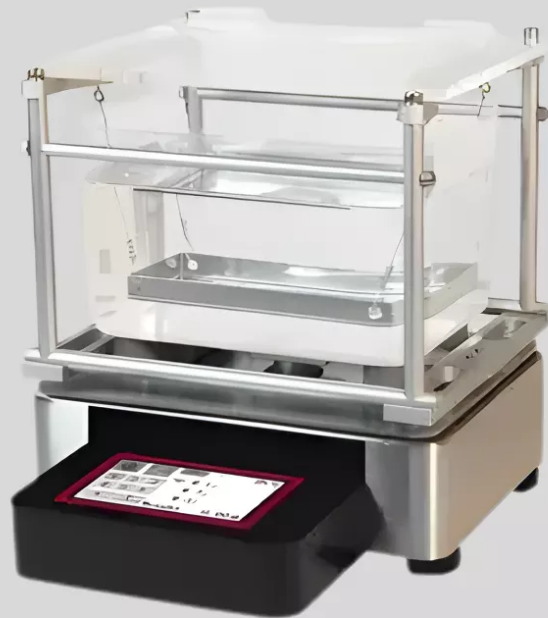




RUBBER, PLASTICS AND ELASTIC MATERIALS DENSITY TESTER

Density Meter | Densimeter | Specific Gravity Tester

The Rubber, Plastics and Elastic Materials Density Tester is a high-precision analytical instrument engineered to measure the density, specific gravity, porosity, and absorption properties of rubber, plastic, elastomers, and a wide range of related solid materials. Operating on the time-tested Archimedes' Principle (buoyancy method), and supported by advanced techniques such as vacuum saturation and boiling saturation, the TTD-PY series delivers fast, repeatable, and laboratory-grade results.

Every model in the series is built around a high-resolution digital balance, an infrared temperature sensor for automatic water-temperature compensation, and an intuitive direct-reading display that eliminates manual calculation. Operators can instantly view bulk density, wet density, porosity, absorption, apparent density, open pores, closed porosity, total porosity, and even two-group mixture ratios — turning a traditionally tedious procedure into a one-touch operation.

Compliant with international standards including ASTM C20, C127, C128, C134, C135, C437, C357, AASHTO T 84, JIS K6530, ISO 1183 / 2781, the Torontech TTD-PY family is trusted in quality-control laboratories, R&D centers, and production facilities worldwide for delivering reliable measurements that meet the most demanding compliance requirements.

Elevate Your Material Testing with Torontech

In today's competitive manufacturing landscape, the quality of your products is only as reliable as the accuracy of the data behind them. Whether you are optimizing rubber formulations, validating plastic batches, developing next-generation composites, or driving research into entirely new elastomeric materials, the Torontech TTD-PY series gives you the precision, repeatability, and confidence to make decisions that move your business forward.

Don't settle for compromise — equip your laboratory with the density-testing platform trusted by quality-assurance professionals, R&D teams, and production engineers worldwide. From the compact TTD-153PY to the heavy-duty TTD-SLPY, every model is engineered to deliver world-class performance backed by Torontech's industry-leading service and support.

APPLICATIONS

Applications in Industries

The versatility of the Rubber, Plastics and Elastic Materials Density Tester makes it indispensable across a broad spectrum of manufacturing, research, and quality-assurance environments. Key application areas include:

- **Rubber & Elastomer Industry** — Quality control of EPDM, silicone rubber, natural rubber, and synthetic elastomers; verification of compound consistency, vulcanization quality, and filler content.
- **Plastics & Polymer Manufacturing** — Density verification of plastic pellets, resins, masterbatches, injection-molded components, and finished plastic parts to ensure batch-to-batch consistency.
- **Footwear & Sponge Industry** — Measurement of EVA foam, sponge materials, midsoles, and lightweight cushioning components where density directly impacts comfort and performance.
- **Automotive & Aerospace** — Validation of sealing components, gaskets, vibration-dampening parts, and composite elastomers used in safety-critical assemblies.
- **Refractory & Carbon Industry** — Density and porosity testing of graphite, carbon electrodes, refractory bricks, and corrosion-resistant materials.
- **Construction & Civil Engineering** — Mixture-ratio research for concrete, asphalt, building composites, and insulation materials.
- **Mining & Geological Research** — Determination of mineral density, ore characterization, and geological sample evaluation.
- **New Materials R&D** — Development of advanced composites, lightweight materials, biopolymers, and innovative elastomeric formulations in academic and industrial research laboratories.

FEATURES

Why Choose Torontech for Your Density Testing Needs

With more than two decades of experience supplying advanced testing and analytical instruments to laboratories and industries across more than 60 countries, Torontech has earned a reputation as a trusted partner for precision measurement solutions. Choosing the Torontech Rubber, Plastics and Elastic Materials Density Tester means investing in more than just a piece of equipment — it means partnering with a global organization committed to your success.

Globally Recognized Quality

Every TTD-PY series instrument is manufactured under strict quality-management protocols and is fully compliant with internationally recognized testing standards including ASTM, ISO, JIS, and AASHTO. This compliance ensures your test data is universally accepted, audit-ready, and defensible in any regulatory or customer-facing context.

Comprehensive Product Range

From compact 150-gram precision testers for R&D micro-samples up to robust 6,000-gram industrial models for oversized components, Torontech offers the broadest density-testing product line in the market. Whatever your sample size, material type, or precision requirement, there is a TTD-PY model engineered to fit.

Cutting-Edge Technology

Every instrument is equipped with intelligent features that elevate productivity: infrared automatic temperature compensation, direct-reading multi-parameter display, five-group memory functions, HI/LO qualification buzzers, dual-mode mixture-ratio calculation, and full digital connectivity via RS-232 and USB ports for seamless data integration with laboratory information management systems (LIMS).

Expert Technical Support

Torontech's dedicated team of application engineers and product specialists is available across multiple time zones to support installation, training, calibration, and ongoing maintenance. With service offices and authorized distributors throughout the USA, Canada, UAE, KSA, GCC, EU, India, APAC, Africa, and Latin America, professional assistance is always

within reach.

Cost-Effective Value

Torontech delivers premium-grade analytical performance at a transparent, competitive price point — eliminating the inflated cost structures of legacy brands while maintaining the accuracy, durability, and feature set that demanding professionals require.

TECHNICAL SPECIFICATIONS

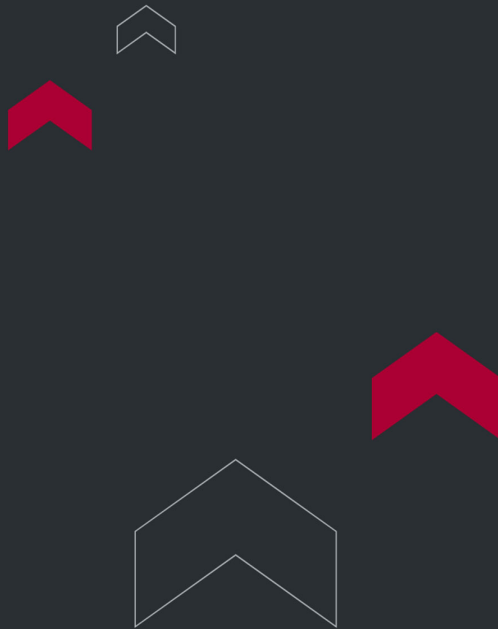
Product Comparison Table

Selecting the right density tester depends on sample size, required precision, and the type of materials being analyzed. The table below provides a side-by-side comparison of all seven models in the Torontech density-testing range — from the general-purpose TTD Solid Series to the ultra-high-capacity TTD-SLPY — helping you identify the configuration that best matches your laboratory or production-line needs.

Specification	TTD Solid Series	TTD-153PY	TTD-214PY	TTD-300PY / 600PY	TTD-1200PY	TTD-LPY	TTD-SLPY
Max Weight Capacity	300g / 500g / 1200g	150g	210g	300g / 600g	1200g	1500g / 2000g / 3000g / 6000g	2000g / 3000g / 6000g
Weighing Precision	0.01g	0.001g	0.0001g	0.01g	0.01g	0.01g (0.1g @ 6000g)	0.01g (0.1g @ 6000g)
Density Precision	0.001 g/cm ³	0.0001 g/cm ³	0.0001 g/cm ³	0.001 g/cm ³	0.001 g/cm ³	0.001 g/cm ³	0.001 g/cm ³

Specification	TTD Solid Series	TTD-153PY	TTD-214PY	TTD-300PY / 600PY	TTD-1200PY	TTD-LPY	TTD-SLPY
Sample Types	Solid, Pellet, Floating	Rubber, Plastic, Elastic	Rubber, Plastic, Elastic	Rubber, Plastic, Elastic	Rubber, Plastic, Elastic	Rubber, Plastic, Elastic (Large)	Rubber, Plastic, Elastic (Super Large)
Measurement Modes	Density, Volume, Mix Ratio	BULK / BK+ / Powder / DS	BULK / BK+ / Powder / DS	BULK / BK+ / Powder / DS	BULK / BK+ / Powder / DS	BULK / BK+ / Powder / DS	BULK / BK+ / Powder / DS
Porosity & Absorption	—	Yes (0.01%)	Yes (0.01%)	Yes (0.01%)	Yes (0.01%)	Yes (0.01%)	Yes (0.01%)
Temp. Compensation	Manual	Auto / Manual / Solution	Auto / Manual / Solution	Auto / Manual / Solution	Auto / Manual / Solution	Auto / Manual / Solution	Auto / Manual / Solution
Memory Groups	—	5 groups	5 groups	5 groups	5 groups	5 groups	5 groups
Interface	Standard	RS-232 & USB	RS-232 & USB	RS-232 & USB	RS-232 & USB	RS-232 & USB	RS-232 & USB
Water Tank Size	Standard	148 × 100 × 85 mm	148 × 100 × 85 mm	148 × 100 × 85 mm	148 × 100 × 85 mm	210 × 170 × 120 mm	Extra Large
Standards	ASTM D297/D792, JIS K6530, ISO 1183/2781	ASTM C20/C127/C128, AASHTO T84	ASTM C20/C127/C128, AASHTO T84	ASTM C20/C127/C128, AASHTO T84	ASTM C20/C127/C128, AASHTO T84	ASTM C20/C127/C128, AASHTO T84	ASTM C20/C127/C128, AASHTO T84
Ideal Application	General solids, pellets, floating samples	Lab-grade micro samples, R&D	Ultra-precise small samples	Standard QC, mid-range samples	Heavy lab samples, industrial QC	Large industrial parts, components	Oversized parts, bulk components

All TTD-PY series models share the same advanced feature platform — including infrared temperature compensation, RS-232 & USB connectivity, HI/LO limit functions with audible alarms, and an optional pycnometer for true powder-density measurement. The primary distinction between models is the maximum weight capacity and weighing-precision class, allowing customers to scale their investment to the exact size and resolution requirements of their samples.



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