TORONTECH



2-STATION DISINTEGRATION TESTER

2-Station Disintegration Tester - ToronDIST™ 2

ToronDIST™ 2 2-station disintegration tester delivers routine pharmaceutical disintegration QC in a compact benchtop workstation designed for pharmacies, hospital compounding units, small-batch manufacturers, and QC labs testing modest daily sample volumes. The instrument runs two independent basket-rack assemblies in parallel, giving 12-tube throughput per cycle for tablets, capsules, sugar-coated tablets, film-coated tablets, and enteric-coated products. Torontech built the platform around a full-color touchscreen interface, real-time bath temperature regulation, and USB export for report generation.

Reciprocation speed is factory-set at 30 to 32 strokes per minute, matching the range specified in common pharmacopoeial disintegration test methods and removing operator method-entry errors on routine batch release runs. Real-time bath temperature control with dual-layer thermal protection and onboard calibration holds uniformity to 0.1°C and accuracy to ±0.3°C, matching the tight thermal window required for reproducible disintegration end-point determination.

Torontech supplies the ToronDIST™ 2 with IQ/OQ qualification documentation for GMP validation and CE certification for the EU market. The compact footprint suits shared bench space in smaller labs where a larger three or four station tester exceeds daily throughput requirements.

APPLICATIONS

2-Station Disintegration Tester - ToronDIST™ 2 Applications

The ToronDIST™ 2 supports routine disintegration testing for small and mid-volume pharmaceutical QC operations.

- Batch Release Testing of Solid Oral Dosage Forms: routine disintegration QC of tablets, capsules, and pills with two parallel baskets covering daily lot-release volumes for small-to-mid size manufacturing operations

- Coated Tablet Disintegration Analysis: sugar-coated, film-coated, and enteric-coated tablet testing where different media stages verify coating integrity
- Capsule Product Quality Control: hard and soft gelatin capsule disintegration testing at controlled temperature to confirm shell dissolution behavior meets product specifications
- Enteric Coating Verification: two-stage acid then buffer testing to confirm enteric coatings resist stomach pH and disintegrate correctly at intestinal pH
- Compounding Pharmacy Quality Checks: disintegration verification of small-batch compounded tablets and capsules requiring compendial method testing
- Hospital Pharmacy QC: routine disintegration monitoring of in-house compounded and repackaged products
- Stability Program Testing: disintegration performance monitoring under ICH storage conditions to support shelf-life determination and expiry date extensions
- Academic Pharmaceutical Research: teaching and research labs requiring pharmacopoeial disintegration testing capability at a workstation footprint suited to shared laboratory space


TORONTECH
ToronDIST™ 2

Standards

The ToronDIST™ 2 carries CE certification for the EU market under the Machinery Directive and Electromagnetic Compatibility Directive.

- EN ISO 12100:2010 - Safety of Machinery: General Principles for Design, Risk Assessment and Risk Reduction
- EN 60204-1:2018 - Safety of Machinery: Electrical Equipment of Machines
- EN 61010-1:2010+A1:2019 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use
- EN IEC 61326-1:2021 - Electrical Equipment for Measurement, Control, and Laboratory Use: EMC Requirements

CE certification covers the EU Machinery Directive 2006/42/EC and EMC Directive 2014/30/EU. IQ/OQ qualification documentation is available upon request.

FEATURES

2-Station Disintegration Tester - ToronDIST™ 2 Key Features

The ToronDIST™ 2 combines two independent basket stations with touchscreen operation and pre-set pharmacopoeia-compliant reciprocation in one compact benchtop workstation.

- Two Independent Basket Stations: 12-tube parallel testing capacity across two baskets, letting labs run two products or two methods simultaneously without sequential batching
- Factory-Set Pharmacopoeia-Compliant Reciprocation: 30 to 32 strokes per minute matches the range specified in common pharmacopoeial disintegration methods, removing operator method-entry error on routine batch release runs
- Full-Color Touchscreen HMI: intuitive touchscreen navigation for method setup, run control, and result review, replacing multi-button controllers and paper method sheets

- Real-Time Temperature Control with Calibration: continuous bath regulation with a dual-layer thermal barrier and onboard calibration function holds uniformity to 0.1°C and accuracy to ±0.3°C
- Interchangeable Sieve Apertures: standard 0.42 mm plus optional 0.71 mm and 1.0 mm meshes adapt the instrument between routine tablets, capsules, and non-standard dosage forms
- USB Data Export and Report Generation: raw disintegration records and formatted reports transfer to lab PCs for downstream documentation without proprietary drivers
- Multi-Language Interface: interface language selection supports laboratories operating in multiple regional languages
- Compact Benchtop Footprint: two-station format fits shared bench space in small QC labs, compounding pharmacies, and academic research settings where a larger tester is oversized
- IQ/OQ Qualification Package: factory-supplied installation and operational qualification documentation supports GMP validation on delivery

THEORY & METHOD

Theory and Method

Disintegration testing measures the time required for a solid oral dosage form to break apart into fragments small enough to pass through a defined mesh under standardized reciprocating-basket motion in a temperature-controlled medium. A basket-rack assembly holding six tubes with wire-mesh bottoms cycles up and down through the medium, and the end point is recorded when no visible fragment remains on the mesh. This time gates the dissolution and absorption steps that follow in vivo.

Reproducibility across baskets depends on tight control of medium temperature, basket geometry, stroke rate, and stroke distance. The ToronDIST™ 2 holds bath temperature uniformity to 0.1°C and accuracy to ±0.3°C through real-time regulation with a dual-layer thermal barrier and onboard calibration. The 55 mm nominal stroke distance and factory-set 30 to 32 strokes per minute reciprocation match the geometry and rate range specified in common pharmacopoeial disintegration test methods, and the pre-set configuration removes method-entry error from routine batch release operation.

Two baskets operate in parallel from a single controller, letting each station run its own six-tube sample set simultaneously. Interchangeable sieve apertures of 0.42 mm standard, 0.71 mm, and 1.0 mm optional adapt the instrument between routine tablet testing, capsule testing, and specialized methods for non-standard formulations. The touchscreen human-machine interface simplifies test setup and result review, replacing paper method sheets and multi-button controllers with an operator workflow that fits GMP training requirements.

TECHNICAL SPECIFICATIONS

2-Station Disintegration Tester - ToronDIST™ 2 Technical Specifications

Parameter	Specification
Stations	2 stations (6 tubes per station)
Basket Reciprocation Speed	30 to 32 strokes/min (factory-set)
Basket Reciprocation Range	55 ± 1.0 mm
Minimum Basket Distance	25 ± 1.0 mm
Sieve Aperture	Standard 0.42 mm; Optional 0.71 mm and 1.0 mm
Temperature Adjustment Range	Ambient to 45.0°C
Temperature Uniformity	0.1°C
Temperature Control Precision	±0.3°C
Cycle Limit	< 15 cycles
Cycle Time Capacity	≤ 9,999 minutes
Voltage	AC 220 V ±10%, 50 Hz (110V is also available)

TORONTECH.com

TORONTECH

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

USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia