



TORONTECH

LABORATORY EXTRUSION & FILM PROCESSING EQUIPMENT



Laboratory Extrusion & Film Processing Equipment

Bench-scale polymer processing, from raw resin to finished test specimen.

Laboratory extrusion and film processing equipment lets polymer researchers run a complete process chain at bench scale. The range covers premixing, extrusion, film and sheet forming, coating, size reduction, and specimen cutting. Throughputs sit between 3 and 30 kg/h, so trials consume kilograms rather than tonnes. Development groups, quality labs, and universities prove a formulation before production commits.

Most machines in the range share a 16 to 20 mm screw platform, so material behaves consistently as a project moves between processes. A compound mixed on the ToronMix™ can be extruded, cast into film, blown into tube, or drawn into filament without a change of scale. Regrind returns to the start of the loop.

Why Choose Torontech for Your Laboratory Extrusion & Film Processing Equipment

Torontech supplies testing and measurement equipment to laboratories and manufacturers across North America and worldwide, backed by responsive technical support and calibration service. The Laboratory Extrusion & Film Processing Equipment range is built for reliable, standards-driven results, so you can standardize on one supplier as your testing needs grow. Our team helps you match the right configuration to your samples, applicable standards, and throughput, then supports you through installation and beyond.

Request a Quote

Tell us the resins you work with, the output form you need, and your throughput, and we will recommend the right combination of machines. [Contact the Torontech team](#) for pricing and lead times.

APPLICATIONS

Applications

This equipment family covers the stage between laboratory synthesis and full production, wherever a material has to be processed before anyone can judge it.

- Polymer Research and Development: converts experimental compounds into pellets, film, sheet, or filament so researchers can measure real processed properties.
- Packaging Film Development: screens resins and additives for clarity, stiffness, and sealing behavior on cast and blown film at sample scale.
- Additive Manufacturing Materials: produces custom and fiber-reinforced filament for print trials that commercial stock cannot support.
- Masterbatch and Compounding: prepares pigment, filler, and additive concentrates, then evaluates dispersion in the finished part.
- Biodegradable and Recycled Polymers: tests whether PLA, PBAT, and reclaimed grades process into usable film and sheet.
- Composite and Reinforced Materials: impregnates continuous fiber with thermoplastic matrix for cores, cables, and print feedstock.
- Quality Control Laboratories: reproduces incoming material under documented conditions to compare supplier lots.
- University and Institute Teaching: demonstrates plasticization, melt draw, nip mechanics, and quench behavior on equipment students can operate.

TECHNICAL SPECIFICATIONS

Laboratory Extrusion & Film Processing Equipment Range

The lineup follows the order a material moves through a laboratory: preparation, extrusion, forming, then recovery and specimen work.

Product	Key Specification	Description
High-Speed Polymer Mixer, ToronMix™	9 L chamber, 0 to 1,500 rpm	Blends, colors, and dries resin before it reaches an extruder. Frictional heating and high shear coat every particle, which suits PVC dry blend and masterbatch premix.
Laboratory Single-Screw Extruder, ToronExt™ SSE 20	20 mm screw, 28:1 L/D, 3 kg/h	The base extrusion platform, with strand pelletizing built in. Interchangeable dies extend it to tube, sheet, and filament work.
3D Printing Filament Extruder, ToronFIL™ 20	1.75 ± 0.02 mm filament	Produces spool-ready filament with an inline diameter gauge and closed-loop servo haul-off. Suits custom, engineering, and fiber-filled print materials.
Laboratory Cast Film Extrusion System, ToronCFL™ 20	200 mm die, 0.02 to 0.1 mm film	Casts flat film onto a roll with edge trimming and inline thickness measurement. Independent servo drives hold gauge steady across a run.
Laboratory Blown Film Extrusion System, ToronBFE™ 20	30 mm die, 120 mm lay-flat width	Extrudes, inflates, cools, and winds tubular film. Also works as a diagnostic for gels, unmelts, and pigment dispersion.
Lab-Scale Three-Roll Calender, ToronTRC™ 300	120 mm rolls, 260 mm face	Compacts extruded melt into flat sheet across two nips, with water-circulation roll temperature control. Pairs with an extruder and calendaring die.
Wire Coating Extruder, ToronExt™ WC 16	16 mm screw, 3 to 15 m/min	Applies a thermoplastic layer over a continuous core through a crosshead die. Built for deep impregnation of carbon fiber tow.
Benchtop Plastic Granulator, ToronGran™ 100	15 to 30 kg/h, 6 to 10 mm screens	Returns sprue, scrap, and off-spec parts to usable regrind. Caster-mounted, so it moves between the press and the extruder.
Laboratory Die Cutting Press, ToronDCP™ Series	1.8 to 5 tons cutting force	Stamps test specimens from film, sheet, and cured rubber. Lever, pneumatic, and rotary table models cover different volumes.

How to Choose the Right Laboratory Extrusion & Film Processing Equipment

- For general compounding and pelletizing: start with the ToronExt™ SSE 20 single-screw extruder, which accepts alternative dies as the work broadens

- For flat film with measured gauge: choose the ToronCFL™ 20 cast film line, where the casting roll and thickness gauge control thickness directly.
- For tubular film, gel checks, or dispersion assessment: choose the ToronBFE™ 20 blown film line, since the bubble itself reveals contamination.
- For sheet with a compacted, smooth surface: add the ToronTRC™ 300 calender to an existing extruder rather than buying a second complete line.
- For 3D printing feedstock: choose the ToronFIL™ 20 for unfilled filament, or the ToronExt™ WC 16 when the core is continuous carbon fiber.
- For formulation prep before any of the above: add the ToronMix™ high-speed mixer to distribute pigments, fillers, and liquid additives.
- For recovering costly experimental resin: add the ToronGran™ 100 granulator so scrap returns to the hopper the same day.
- For preparing specimens after processing: choose the ToronDCP™ Series die cutting press, with the pneumatic model for higher specimen counts.



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

