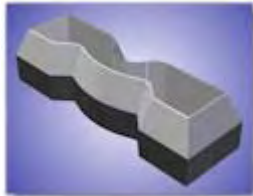
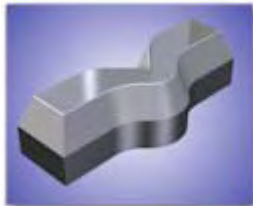


Ultra-Life Tear Die A



Ultra-Life Tear Die B



Ultra-Life Tear Die C

CCSi manufactures these high quality *Ultra-Life* Specimen Cutting Dies for evaluating the tear strength of conventional vulcanized thermoset rubber and thermoplastic elastomers, as described in [ASTM D624 'Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers'](#) by measuring the 'force per unit thickness' required to either rupture, initiate, or propagate a tear in one of five test specimen geometries using a suitable tensile (tension) testing instrument.

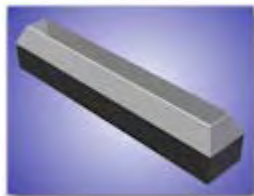
The five specimen die types are identified and described as:

- *Tear Die A*: a specimen, in a crescent shape, which is *nicked* by a razor. The force acts along the major axis, perpendicular to the *nick* and measures tear propagation.
- *Tear Die B*: a specimen, in the familiar dumbbell shape, having an opposing 'v' shape, which is *nicked* by a razor. The force acts along the major axis, perpendicular to the *nick* and measures tear propagation, it is preferred to Type A when there is enough available material to perform the test. This specimen is also used in [ISO 34 'Rubber, vulcanized or thermoplastic – Determination of tear strength – Part 1: Trouser, angle and crescent test pieces'](#).
- *Tear Die C*: a *non-nicked* specimen having elongated square ends and a centrally located, offset, 90° angle. The force acts along the major axis, at between 45° and 90° to the apex of the angle, the focus of applied stress. This measures *tear initiation* or *rupture*, depending on the material or the desired outcome.

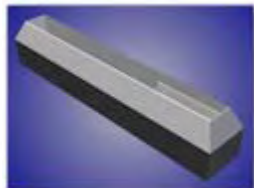
- *Tear Die T* or 'Trouser Tear': a rectangular specimen containing a slit. The force acts along the major axis, the direction of the slit, in a direction parallel to the length. This measures *tear propagation* and is widely used in the testing of textiles, coated fabrics, and similar materials. A *Tear Die T* die with an integral cutter for producing the slit is also available (see below)
- *Tear Die CP* (Constrained Path): a modified Trouser Tear Die, this die (not shown) constrains the path and direction of the tear during the test.

CCSi manufactures a high quality [Specimen Nicking Apparatus](#) for precisely nicking Type A and Type B (ISO 34) specimens. This innovative apparatus assures that the propagation of the tear is accurately replicated, improving repeatability and reproducibility.

CCSi *Ultra-Life* Specimen Dies: Quality Manufacturing



Ultra-Life Trouser Tear Die



Ultra-Life Slit Trouser Tear Die

CCSi *Ultra-Life* specimen cutting dies are manufactured from homogenous, solid, high carbon content A2 tool steel. Each undergoes multi-axis precision grinding and conventional, plunge, or wire EDM (Electrical Discharge Machining) processes ... producing a world-class, close tolerance die.

Precision grinding and EDM processes ensure true parallelism and multi-plane dimensional accuracy. The quality of materials, design, and engineering serve to provide the highest specimen quality possible, over an extended service life.

Where highly technical manufacturing techniques and processes end ... old-world craftsmanship begins!

CCSi *Ultra-Life* specimen cutting dies are individually serialized, hand-honed, and mirror polished. A protective coating of industrial enamel is applied to the non-cutting surfaces before undergoing a rigorous final inspection.

Each *Ultra-Life* specimen cutting die includes a detailed final report and certification to the applicable standard, traceable to NIST, and compliant with ISO 9001:2000 and ISO/IEC 17025. The specimen dies are placed in a plastic, blow-molded, 'clam shell' style case with a foam lining to protect the die during transport and storage.

The CCSi Specimen Cutting Dies Feature:

- Exclusive *Ultra-Life* cutting edge technology;
- Designed with advanced 3D solid modeling;
- High carbon content A2 tool steel;
- Manufactured using computerized systems and techniques;
- EDM (Electrical Discharge Machining);
- CNC (Computer Numerical Control) 4 axis machining;
- Precision ground;
- Expertly honed;
- Finely polished;
- Protective industrial enamel coating;
- Plastic, foam lined, protective case;
- Traceability of dimensional measurement to NIST;
- Certification to ASTM D624;
- Compliance with ISO 9001:2000 and ISO/IEC 17025.

Available in:

- ASTM D624 Tear Die Types A, B, C, T, T with Integral Slitter, & CP;
- Mallet handle, arbor press mount, & press adapter versions.

CCSi *Ultra-Life* ASTM D624 Specimen Cutting Dies: Specifications & Pricing

Part Number	Description
CCSi-D624-An	Die A: ASTM D624 Die A without mounting device
CCSi-D624-Aa	Die A: ASTM D624 Die A with arbor press mount
CCSi-D624-Ap	Die A: ASTM D624 Die A with press adapter
CCSi-D624-Am	Die A: ASTM D624 Die A with mallet handle
CCSi-D624-Bn	Die B: ASTM D624 Die B without mounting device
CCSi-D624-Ba	Die B: ASTM D624 Die B with arbor press mount
CCSi-D624-Bp	Die B: ASTM D624 Die B with press adapter
CCSi-D624-Bm	Die B: ASTM D624 Die B with mallet handle
CCSi-D624-Cn	Die C: ASTM D624 Die C without mounting device
CCSi-D624-Ca	Die C: ASTM D624 Die C with arbor press mount
CCSi-D624-Cp	Die C: ASTM D624 Die C with press adapter
CCSi-D624-Cm	Die C: ASTM D624 Die C with mallet handle
CCSi-D624-Tn	Die T: ASTM D624 Die T without mounting device
CCSi-D624-Ta	Die T: ASTM D624 Die T with arbor press mount
CCSi-D624-Tp	Die T: ASTM D624 Die T with press adapter
CCSi-D624-Tm	Die T: ASTM D624 Die T with mallet handle
CCSi-D624-Tsn	Die T: ASTM D624 Die T with Integral Slitter without mounting device
CCSi-D624-Tsa	Die T: ASTM D624 Die T with Integral Slitter with arbor press mount
CCSi-D624-Tsp	Die T: ASTM D624 Die T with Integral Slitter with press adapter
CCSi-D624-Tsm	Die T: ASTM D624 Die T with Integral Slitter with mallet handle
CCSi-D624-CPn	Die CP: ASTM D624 Die CP without mounting device
CCSi-D624-CPa	Die CP: ASTM D624 Die CP with arbor press mount
CCSi-D624-CPp	Die CP: ASTM D624 Die CP with press adapter
CCSi-D624-CPm	Die CP: ASTM D624 Die CP with mallet handle
Please Request a Quotation for current pricing and delivery.	

CCSi manufactures ASTM D624 dimensional specimen molds for specimen configurations A, B, C and T. Molding of the test specimens is a viable and cost effective alternative to molding test 'slabs' and then die cutting the specimens. Please visit the CCSi specimen mold pages for more information.