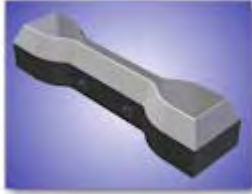


Ultra-Life ASTM D412 Die A



Ultra-Life ASTM D412 Die B

CCSi manufactures these high quality *Ultra-Life* Specimen Cutting Dies for evaluating the tensile (tension) of vulcanized thermoset rubber and thermoplastic elastomers as indicated in [ASTM D412](#) '*Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension*'.

The test specimens are configured as rings, straight, or various 'dumbbell' shapes, with the 'dumbbell' being the most widely used. Each specimen is designed to measure a material's characteristic of either tensile stress, tensile stress at a given elongation, tensile strength, yield point, or ultimate elongation.

The specimens are generally cut from test pieces prepared in a laboratory mold, described in [ASTM D3182](#) '*Standard Practice for Rubber—Materials, Equipment, and Procedures for Mixing Standard Compounds and Preparing Standard Vulcanized Sheets*', which CCSi also manufactures.

These cutting dies are also specified in:

[ASTM D454](#) '*Standard Test Method for Rubber – Deterioration by Heat and Air Pressure*';

[ASTM D572](#) '*Standard Test Method for Rubber – Deterioration by Heat and Oxygen*';

[ASTM D573](#) '*Standard Test Method for Rubber – Deterioration in an Air Oven*';

[ASTM D865](#) '*Standard Test Method for Rubber – Deterioration by Heating in Air (Test Tube Enclosure)*';

[ISO 1798](#) '*Flexible cellular polymeric materials – Determination of tensile strength and elongation at break*'.

CCSi also has available, by special request, the Tensile Set Apparatus and the Ring Cutter Device, described in ASTM D412 Method B and [ISO 37](#) '*Rubber, vulcanized or thermoplastic – Determination of tensile stress-strain properties*'

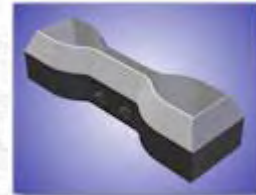
CCSi *Ultra-Life* Specimen Dies: Quality Manufacturing

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.

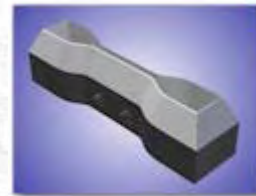
Precision grinding and EDM processes ensure true parallelism and multi-plane dimensional accuracy. The quality of materials, design, and engineering serve to provide the highest specimen quality possible, over an extended service life.

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.



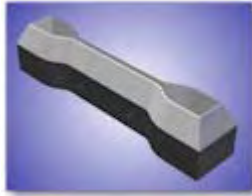
Ultra-Life ASTM D412 Die C



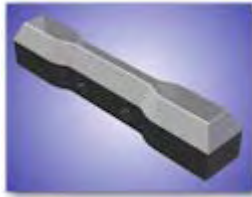
Ultra-Life ASTM D412 Die D

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.

CCSi *Ultra-Life* Specimen Dies: Features



Ultra-Life ASTM D412 Die E



Ultra-Life ASTM D412 Die F

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 D412;
- Compliance with ISO 9001:2000 and ISO/IEC 17025.

Available in:

- ASTM D412 Die A, B, C, D, E & F configurations;
- Mallet handle, arbor press mount, & press adapter versions;
- May be used for ASTM D454, ASTM D572, ASTM D573, & ASTM D865.

CCSi *Ultra-Life* ASTM D412 Specimen Cutting Dies: Specifications & Pricing

Part Number	Description
CCSi-D412-An	Die A: ASTM D412 Die A without mounting device
CCSi-D412-Aa	Die A: ASTM D412 Die A with arbor press mount
CCSi-D412-Ap	Die A: ASTM D412 Die A with press adapter
CCSi-D412-Am	Die A: ASTM D412 Die A with mallet handle
CCSi-D412-Bn	Die B: ASTM D412 Die B without mounting device
CCSi-D412-Ba	Die B: ASTM D412 Die B with arbor press mount
CCSi-D412-Bp	Die B: ASTM D412 Die B with press adapter
CCSi-D412-Bm	Die B: ASTM D412 Die B with mallet handle
CCSi-D412-Cn	Die C: ASTM D412 Die C without mounting device
CCSi-D412-Ca	Die C: ASTM D412 Die C with arbor press mount
CCSi-D412-Cp	Die C: ASTM D412 Die C with press adapter
CCSi-D412-Cm	Die C: ASTM D412 Die C with mallet handle
CCSi-D412-Dn	Die D: ASTM D412 Die D without mounting device
CCSi-D412-Da	Die D: ASTM D412 Die D with arbor press mount
CCSi-D412-Dp	Die D: ASTM D412 Die D with press adapter
CCSi-D412-Dm	Die D: ASTM D412 Die D with mallet handle
CCSi-D412-En	Die E: ASTM D412 Die E without mounting device
CCSi-D412-Ea	Die E: ASTM D412 Die E with arbor press mount
CCSi-D412-Ep	Die E: ASTM D412 Die E with press adapter
CCSi-D412-Em	Die E: ASTM D412 Die E with mallet handle
CCSi-D412-Fn	Die F: ASTM D412 Die F without mounting device
CCSi-D412-Fa	Die F: ASTM D412 Die F with arbor press mount
CCSi-D412-Fp	Die F: ASTM D412 Die F with press adapter
CCSi-D412-Fm	Die F: ASTM D412 Die F with mallet handle

Please Request a [Quotation](#) for current pricing and delivery.

CCSi manufactures ASTM D412 dimensional specimen molds for specimen configurations A through F. 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.

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