

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for ASTM D638 Type II

Dumbbell Type II · Tensile specimen — built to ASTM D638: Standard Test Method for Tensile Properties of Plastics



OVERVIEW

Solid cutting die for cutting Dumbbell Type II specimens to ASTM D638. The die is machined from a single piece of steel, hardened and finished with a sharp, precision cutting edge, so it holds its profile when cutting harder plastics from 0 to 5 mm thick.

KEY FEATURES

- Machined from a single piece of steel — no joints or seams in the cutting edge
- Hardened, precision-finished edge for clean, square specimen sides
- Cuts harder plastics, filled compounds and sheet from 0–5 mm thick
- Integral ejector plate releases the specimen after cutting
- Long service life; cutting edge can be re-sharpened

SPECIMEN PROFILE

Overall length (min)	183 mm
Width of narrow section	6 ± 0.5 mm
Length of narrow section	57 ± 0.5 mm
Width of ends	19 ± 6.4 mm
Gauge length	50 ± 0.25 mm
Radius of fillet	76 ± 1 mm
Thickness	3.2 ± 0.4 mm (≤7 mm)

Nominal values per ASTM D638; die is cut to the standard's profile.

APPLICATIONS

- Molded plastic parts
- Extruded sheet
- Reinforced composites
- Material qualification & QC

DIE SPECIFICATIONS

Die construction	One-piece machined steel body
Cutting edge	Hardened, precision-finished
Material thickness	0 – 5 mm
Recommended materials	Rigid & semi-rigid plastics, filled compounds, rubber, sheet & film
Specimen ejection	Integral ejector plate
Press compatibility	Manual, pneumatic & hydraulic sample-cutting presses
Cut profile	Dumbbell Type II per ASTM D638

ABOUT THE STANDARD

ASTM D638 covers tensile strength, modulus and elongation of unreinforced and reinforced plastics using dumbbell specimens. The Type II profile is a narrower variant used when Type I will not break in the narrow section.

Ordering & customization: Specify the standard and specimen type, die style (ribbon steel or hardened steel), the material and thickness you cut, and your press make/model so we can match the mounting. Custom profiles, multi-cavity dies and nick/notch features are available on request.

Also available: Ribbon Steel version
Economical steel-rule die for rubber, elastomers and soft plastics up to 3 mm thick — same ASTM D638 Type II profile.

Specifications are typical and may vary by configuration; confirm at time of quote. Refer to the current edition of the standard for specimen tolerances and test procedures. Part ref. UGC-CDH-D638-TII