

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for JIS K6251 Type 1

Dumbbell No. 1 · Tensile specimen — built to JIS K6251: Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties



OVERVIEW

Solid cutting die for cutting Dumbbell No. 1 specimens to JIS K6251. 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	120 mm
Width of ends	25 mm
Width of narrow section	10.0 ± 0.1 mm
Length of narrow section	40 mm
Gauge length	40 ± 0.5 mm
Recommended thickness	2.0 ± 0.2 mm

Nominal values per JIS K6251; die is cut to the standard's profile.

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 No. 1 per JIS K6251

APPLICATIONS

- Tire and belt compound QC
- Seals, gaskets and O-ring materials
- Hose and molded rubber goods
- Elastomer R&D and incoming inspection

ABOUT THE STANDARD

JIS K6251 specifies how to measure tensile strength, elongation at break and stress at given elongation of vulcanized and thermoplastic rubbers using die-cut dumbbells. The large No. 1 dumbbell, with a 10 mm wide, 40 mm parallel section, is used where a long gauge length and large cross-section are preferred.

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 JIS K6251 Type 1 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-JISK6251-T1