

HARDENED STEEL CUTTING DIE

Hardened Steel Cutting Die for JIS K6251 Type 4

Dumbbell No. 4 · Tensile specimen — built to JIS K6251: Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties



OVERVIEW

Solid cutting die for cutting Dumbbell No. 4 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 (approx.)	100 mm
Width of ends	25 mm
Width of narrow section	5.0 ± 0.1 mm
Length of narrow section	20 mm
Transition radius	40 mm
Gauge length	20 ± 0.5 mm
Recommended thickness	1.0 mm or less

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. 4 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

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.

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. Dumbbell No. 4 has the same 5 mm by 20 mm narrow section as No. 3 but a larger transition radius and is intended for thin sheet of 1 mm or less.

Also available: Ribbon Steel version

Economical steel-rule die for rubber, elastomers and soft plastics up to 3 mm thick — same JIS K6251 Type 4 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-T4