RIBBON STEEL CUTTING DIE

Ribbon Steel Cutting Die for JIS K6251 Type 7

Dumbbell No. 7 · Tensile specimen — built to JIS K6251: Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties

Representative ribbon steel die

OVERVIEW

Steel-rule style cutting die for cutting Dumbbell No. 7 specimens to JIS K6251. A precision-bent, hardened ribbon-steel rule is set into a laser-cut plywood base with a foam ejection pad, giving clean, repeatable cuts in rubber, elastomers and soft plastics from 0 to 3 mm thick.

KEY FEATURES

- Hardened ribbon-steel rule precision-bent to the JIS K6251 Type 7 profile
- Laser-cut multi-ply plywood base holds the rule rigidly in position
- Foam ejection pad pushes the specimen free after every stroke
- Ideal for rubber, elastomers, TPE, foam and soft plastics 0–3 mm thick
- Economical, fast-turnaround option for routine QC and lab testing

SPECIMEN PROFILE

Overall length (min)	35 mm
Width of ends	6.0 ± 0.5 mm
Width of narrow section	2.0 ± 0.1 mm
Length of narrow section	12 ± 0.5 mm
Transition radius (inner / outer)	3 mm / 3 mm
Gauge length	10 ± 0.5 mm
Recommended thickness	1.0 ± 0.1 mm

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

DIE SPECIFICATIONS

Die construction	Ribbon-steel rule (steel-rule die) in plywood base
Cutting edge	Hardened steel rule, precision bent
Material thickness	0 – 3 mm
Recommended materials	Rubber, elastomers, TPE, foams, soft plastics & films
Specimen ejection	Closed-cell foam ejection pad
Press compatibility	Manual, pneumatic & hydraulic sample-cutting presses
Cut profile	Dumbbell No. 7 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. Dumbbell No. 7 is a miniature specimen for small finished parts, thin sections or very limited sample material.

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: Hardened Steel version
Machined from one piece of hardened steel for harder plastics up to 5 mm thick — same JIS K6251 Type 7 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-CDR-JISK6251-T7