

**HARDENED STEEL CUTTING DIE**

# Hardened Steel Cutting Die for JIS K7161-2 1B

Tensile Dumbbell Type 1B · Tensile specimen — built to JIS K7161-2: Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics


**OVERVIEW**

Solid cutting die for cutting Tensile Dumbbell Type 1B specimens to JIS K7161-2. 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)     | 150 mm        |
| Width of ends            | 20.0 ± 0.2 mm |
| Width of narrow section  | 10.0 ± 0.2 mm |
| Length of narrow section | 60.0 ± 0.5 mm |
| Transition radius (min)  | 60 mm         |
| Gauge length             | 50.0 ± 0.5 mm |
| Recommended thickness    | 4.0 ± 0.2 mm  |

Nominal values per JIS K7161-2; 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           | Tensile Dumbbell Type 1B per JIS K7161-2                            |

**APPLICATIONS**

- Molded plastic resin QC
- Material datasheet property generation
- Incoming resin lot acceptance
- Polymer R&D and compound comparison

**ABOUT THE STANDARD**

JIS K7161-2 sets tensile test conditions for molding and extrusion plastics. Type 1B is the preferred specimen when machining or die-cutting from plates or sheet.

**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 K7161-2 1B 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-JISK71612-T1B