Hydraulic Wedge Grips for Plastic Tensile Specimens

Built to ASTM D638 — Standard Test Method for Tensile Properties of Plastics



OVERVIEW

Hydraulically actuated wedge grips for tensile testing of rigid and reinforced plastics to ASTM D638. Hydraulic clamping applies a consistent, adjustable grip pressure to dumbbell specimens, holding them securely through yield and break without operator-dependent tightening, and keeping specimens aligned on the load axis.

KEY FEATURES

- Hydraulic clamping gives repeatable, adjustable grip pressure on every specimen
- Wedge action increases clamping force as tensile load rises
- Interchangeable faces for rigid, reinforced and soft plastics
- Self-aligning design keeps dumbbell specimens on the load axis
- Fast loading and release improves throughput in production QC labs

TECHNICAL SPECIFICATIONS

Test method	Uniaxial tension of plastic dumbbell specimens
Test type / loading	Static tension, constant crosshead rate
Specimens	ASTM D638 Type I-V dumbbells and similar flat or round specimens
Load capacity	50 kN standard; higher capacities on request
Actuation	Hydraulic, adjustable clamping pressure
Gripping surfaces	Replaceable serrated or smooth faces to suit material
Machine connection	Clevis pin or threaded adapter, to suit customer frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Molded and machined plastic dumbbells
- Glass- and fiber-filled compounds
- Resin qualification and material specs
- Production QC and incoming inspection

ABOUT THE STANDARD

ASTM D638 determines the tensile properties of unreinforced and reinforced plastics, including tensile strength, elongation and modulus. Standard dumbbell-shaped specimens (Types I to V, selected by material and thickness) are pulled at a constant crosshead speed until failure, with strain measured by extensometer. It is one of the most widely used methods for plastics characterization and specification.

Ordering & customization: Specify specimen type and thickness range, required capacity, preferred jaw face and test machine connection. Hydraulic power supply options available on request.

Specifications are typical and may vary by configuration; confirm at time of quote. Users should refer to the current edition of the standard for test procedures. Part ref. UGC-D638-HG