

Nut Proof Load Test Fixture

Built to ISO 898-2 — Fasteners — Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes



OVERVIEW

Fixture set for proof load testing of nuts on a hardened test mandrel. Cylindrical housings with side-entry slots accept the mandrel head and bearing plate, so the nut is loaded axially against a hardened bearing surface; a threaded top connection mounts the set directly to the load frame.

KEY FEATURES

- Side-entry slotted housings for fast mandrel and nut loading
- Hardened bearing plate with hole sized to the nut thread
- Threaded top connection for rigid mounting to the load frame
- Heavy cylindrical body keeps the load axial at high forces
- Accepts interchangeable mandrels and bearing plates by thread size

TECHNICAL SPECIFICATIONS

Test method	Nut proof load test
Test type / loading	Axial tension via hardened test mandrel
Specimens	Metric nuts; mandrels and plates per thread size
Load capacity	500 kN standard; other capacities on request
Fixture material	Heat-treated alloy steel
Contact surfaces	Hardened bearing plates; hardened test mandrels
Machine connection	Threaded spigot (e.g. M50 × 2) or adapter, to suit frame
Compatible frames	Electromechanical and servo-hydraulic universal test machines

APPLICATIONS

- Hexagon nuts, classes 5–12
- Fine pitch and coarse thread nuts
- Fastener manufacturers and test houses
- Lot certification and incoming inspection

ABOUT THE STANDARD

ISO 898-2 specifies the mechanical and physical properties of carbon and alloy steel nuts in property classes such as 8, 10 and 12. The key test is the proof load test: the nut is assembled on a hardened test mandrel and loaded axially to the specified proof load, then must be removable by hand without thread stripping or nut fracture.

Ordering & customization: Specify nut thread sizes and pitches, property classes, whether mandrels are required, and test machine connection when ordering.

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-ISO898-2-TF