



ROCK MECHANICS • LABORATORY EQUIPMENT

Load Frame Fixtures

UCS • ITB • PLF

Your supplier of high-pressure laboratory instruments and advanced geotechnical testing equipment

The Floxlab Load Frame Fixtures range provides complete solutions for characterising the mechanical behaviour of rock specimens under uniaxial compression, indirect tension and point load. Each fixture mounts on any standardised load frame and is engineered for precise, ASTM-compliant testing in laboratory and field conditions.

FIXTURE CATEGORIES

UCS

Uniaxial Compression

Compression platens & deformation sensors for unconfined rock compression tests.

Ø up to 150 mm
800 MPa max stress
ASTM D7012 • D7070

ITB

Indirect Tensile (Brazilian)

Brazilian test fixture with precision loading jaws and dedicated 250 kN load cell.

Ø 42 to 150 mm
250 kN load cell
ASTM D3967

PLF

Point Load Fixture

Quick field and lab rock classification through the point load index $I_s(50)$.

Ø 25.4 to 101.6 mm
100 kN capacity
ASTM D5731

STANDARDS & COMPLIANCE ASTM D7012 • ASTM D7070 • ASTM D5731 • ASTM D3967

Compatible with GEOLAB, ROCKTEST and MECATEST load frames — engineered in France.

UCS — Uniaxial Compression

Platens & deformation sensors for unconfined rock compression tests

UCS Uniaxial Compression Platens

ASTM D7012 · D7070 compliant



Versatile uniaxial compression platens that mount on any load frame to perform unconfined rock compression tests and determine compressive strength. High platen stiffness minimises deflection when testing high-strength rocks. The lower platen is fixed for stable specimen support; the upper platen includes a spherical seat to guarantee perfect alignment with the specimen surface. The rock sample is wedged between two parallel platens and loaded progressively until failure.

KEY FEATURES

- Standards: ASTM D7012, ASTM D7070
- Compression load stress up to 800 MPa
- Wetted parts in stainless steel
- Platen sets: up to 150 mm (6")
- Compatible with any standardised load frame

800 MPa

Max compression stress

150 mm

Max specimen \varnothing

Multiple Platens

Platen sizes

Stainless steel

Wetted parts

UCS Axial & Circumferential Deformation Sensors

LVDT + circumferential extensometer



UCS deformation sensors measure axial and lateral specimen deformation during uniaxial compression tests. A circumferential extensometer measures radial strain, while axial deformation is recorded by a Linear Variable Differential Transformer (LVDT). Sensor outputs enable full stress-strain curves — including post-failure behaviour — and calculation of Young's modulus and Poisson's ratio.

KEY FEATURES

- Sensor types: LVDT (axial) + circumferential extensometer
- Ranges: up to 55 / 100 / 150 mm
- Strain-controlled testing via direct servo control
- Ethernet connection to PC for real-time display

ITB & PLF Fixtures

Indirect tensile (Brazilian) testing and Point Load rock classification

ITB-250 Standard Indirect Tensile Fixture

Brazilian test — ASTM D3967 compliant



The ITB fixture evaluates the tensile strength of cylindrical specimens by applying uniform diametrical line compression — the Brazilian test method. The specimen is compressed between two precision-machined cylindrical loading jaws, inducing indirect tensile stress. The apparatus includes precision loading jaws and a spherical bearing for proper alignment. Two models are available: a standard version for specimens up to 76 mm and an extended version up to 150 mm.

KEY FEATURES

- Standard: ASTM D3967 — Brazilian test
- Type 1 jaws: 42 · 47.6 · 54.7 · 63.5 · 76.2 mm
- Type 2 jaws: 54.7 · 63.5 · 76.2 · 85 · 100 · 150 mm
- Dedicated 250 kN load cell
- Includes spherical bearing for alignment

250 kN

Dedicated load cell

∅ 150 mm

Max specimen

2 types

Standard / Extended

D3967

ASTM compliant

PLF-100 Point Load Fixture

Rock classification — ASTM D5731



The PLF-100 enables quick quality control on core samples. It determines the uncorrected point load strength index (I_s), which is converted to the standardised I_s(50) for a 50 mm specimen — used for rock strength classification and to estimate Uniaxial Compressive Strength without extensive sample preparation. Also evaluates the rock anisotropy index I_a(50).

KEY FEATURES

- Standard: ASTM D5731 — Point load test
- Compression load capacity: 100 kN
- Specimen diameter: 25.4 to 101.6 mm (1" to 4")
- Conical platens, stainless steel wetted parts

Capabilities & Contact

Measurements, compatible load frames and how to reach us

MEASUREMENTS & CAPABILITIES

Unconfined Compressive Strength

Full stress-strain curve — including post-failure

Young's modulus & Poisson's ratio

From axial and radial strain measurements

Indirect tensile strength

Brazilian test on cylindrical specimens

Point load index $I_s(50)$

Rock strength classification & anisotropy

COMPATIBLE LOAD FRAMES

GEOLAB Standard compression load frame

ROCKTEST Servo-controlled high-capacity frame

MECATEST Mechanical testing frame

Any standardised load frame Mounts directly on existing lab equipment

CONTACT US

ADDRESS

FloXlab
23 rue du Port
92000 Nanterre — France

PHONE

+33 (0)1 81 93 12 85

SCAN ME



Visit floxlab.com

EMAIL

contact@floxlab.com

WEB

www.floxlab.com