



Open-structure linear friction welding machine

LinFric Group linear friction welding machine

The world's first open-structure LFW machine, developed by the LinFric Group and TWI.

Features and benefits

- Fully instrumented to record input parameters, and force and displacement histories
- Universal adapter, allowing for customised tooling
- Repeatable weld quality
- Short welding times

Some applications

- LFW research and development for the joining of:
 - Titanium alloys
 - Nickel-based superalloys
 - Aluminium alloys
 - Steels
 - Dissimilar materials
- Integrated bladed disks (blisks) for aero-engines
- Aircraft wing ribs
- Structural preforms (near-net-shape manufacturing)

Technical specification

- Oscillation type: servo control (hydraulic)
- Oscillation movement: short-stroke oscillation
- Max. oscillation amplitude: $\pm 4.0\text{mm}$
- Max. oscillation frequency: 100Hz
- Max. oscillation capacity: 10s
- Forge type: hydraulic
- Max. force: 200kN
- Override force: 250kN

