



# Linear friction welding machine

Thompson E20 linear friction welding machine

Off-the-shelf linear friction welding machine capable of delivering repeatable, high-quality performance.

## Features and benefits

- Stiffened machine, minimising deflection during welding
- 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:  $\pm 3.0\text{mm}$
- Max. oscillation frequency: 100Hz
- Max. oscillation capacity: 10s
- Forge type: hydraulic
- Max. force: 200kN
- Override force: 250kN

