

## Instron 8802 ( $\pm 100$ kN)



### Overview

- Compact, floor-standing servo-hydraulic fatigue test system
- Suitable for various static and dynamic testing requirements for advanced materials and component testing; ideally suited for fatigue testing and fracture mechanics

### Applications

Product/service	Loading modes	Main uses	Materials
<ul style="list-style-type: none"><li>• Mechanical durability testing</li><li>• Fatigue life characterisation</li></ul>	<ul style="list-style-type: none"><li>• Compression</li><li>• Tension</li><li>• Flexure</li></ul>	<ul style="list-style-type: none"><li>• Low-cycle fatigue of coupons &amp; components; tension-tension, compression-compression and tension-compression regimes</li><li>• Crack onset and growth</li><li>• Frequencies up to 20 Hz</li></ul>	<ul style="list-style-type: none"><li>• Composite</li><li>• Metals</li><li>• AM</li><li>• Polymers</li></ul>

### Recent use cases

- Flexural fatigue life of glass-fibre reinforced epoxy material determined out to  $10^7$  cycles at 15 Hz; maximum stress versus cycles to failure (S/N) plots generated
- Mode I fatigue crack onset and growth of structural adhesive used for bonding glass-fibre reinforced composite adherends
- Characterisation of end-loaded compression-compression fatigue life of composites used for renewable energy applications