



High-rate servo-hydraulic test machine

Instron VHS 160/100-20

Test machine and environmental chamber for carrying out dynamic tensile and fracture testing at very high strain rates.

Features and benefits

- Allows research into effects of various loading rates on different materials and welds
- Dynamic tensile testing to determine high-strain-rate yield strength and UTS
- High-speed impact and compressive loading
- Dynamic fracture toughness testing
- Environmental chamber for high- and low-temperature dynamic tests
- Can be used with digital image correlation (DIC) and high-speed video

Some applications

- Characterise materials which may experience fast loading rates, such as ballistics, impact, crash, sea states and severe weather loading
- Research into effects of dynamic loading on different materials
- Commercial testing work in which dynamic properties are required

Technical specification

- 40kN to 100kN capacity
- Capable of velocities up to 20m/s
- Environmental chamber temperature range: -100°C to +250°C
- High-stiffness load frames
- 280 bar supply pressure
- Specialised measurement transducers
- Patented FastJaw gripping techniques
- High-speed data acquisition package
- VHS8800 controller package

