

Rotary Fatigue Test Machine



Rotary Fatigue Test Machine

This machine is designed to perform dynamic cornering fatigue tests on wheels per SAE, SFI5.0 and JASO T203. The machine is designed to impart a constant rotating bending moment to the wheel through applying a load at 90 degrees to the wheel mounting face. This simulates the forces applied to the wheel when cornering during rotation. Wheel failures generated through this testing include the inability to hold load and/or a visually detected fatigue crack penetrating thru a section of the wheel.

Features:

- Operator interface panel (touch screen)
- Control panel with Allen-Bradley PLC with master computer for machine operation
- Hydraulic loading with Self-contained Hydraulic Power Unit
- Airbag shaft lift system for wheel mounting and dismounting. Airbag drops out of way while wheel is running
- Display of all Measured Parameters, English or Metric, including applied force, speed, deflection, elapsed time, elapsed revolutions
- Manual Cylinder leveling system for ensuring 90 degree force application
- Safety interlocks provided as standard equipment for over-loading, under loading, excessive deflection and safety cover
- Table lock for ease in torquing wheel

Capabilities:

- Capable of testing rim/wheel diameters from 12 - 28 inches
- Programmable Machine control for up to 20 steps
- Automatic shutdown at load loss, deflection exceeding set point, or preset test cycles or test time

Specifications:

- Speed: Variable 100 to 750 RPM
- Maximum Load Rating: 44 kN (10,000 ft-lbs)
- Speed and Load accuracy: Plus or minus 1% of set point
Control and calibration
- Table diameter: 36 inches
- Moment arm: 36 inches or one meter
- Power requirements: 460V, 60HZ, 3 phase
380V, 50HZ, 3 phase

Machine Options:

- Addition of Slip Rings for Strain Gauge connection



Airbag Inflated



Airbag Deflated



Table Locking Device



Manual Leveling Device

Machinery manufactured by STL is built with heavy duty tubular construction and is designed to last. All machines are built with top notch quality and use advanced computer controls with operator interface technology. Because each machine is designed to customer specifications, the customer is always satisfied. This equipment is designed to allow for easy upgrades. Machine is built with evenly distributed supports for distributed floor loading. No special foundation is required for machine installation.