



US Patent # 6, 199, 801

Application

SoftRide UniFlex is a uniaxial flexure system designed for vibration isolation of a whole spacecraft from launch vehicle-induced dynamic loads. This system is ideal for reducing axial (thrust-direction) loads imparted to the spacecraft by a factor of two or more and has also been shown to reduce lateral loads. SoftRide UniFlex may be inserted at any field joint below the spacecraft and does not require modifications to flight hardware.

Features

- Attenuates predominantly axial vibration loads
- Attenuates launch vehicle shock loads
- Monolithic titanium construction
- Constrained layer damping
- Linear passive isolation system, no linkages, no fluids

Specifications

- Isolation frequency: Mission-specific, 20 Hz to 40 Hz
- Weight: Mission-specific, approximately 20 lb to 40 lb
- Dimensions: Typically 1" high x 6" long x 0.75" wide
- Payload weight: Isolators can be sized for any payload
- Quantity required: Mission-specific, minimum of 3.

Flight Heritage

Five systems flown on Taurus (1998 - 2001)

