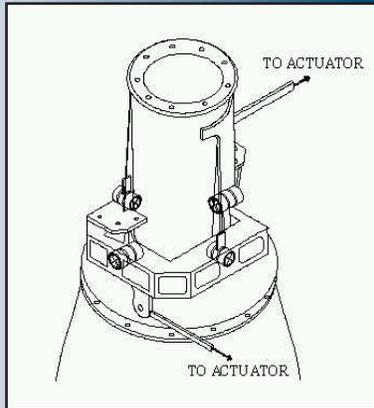


Flexural Pivot Applications

• Gimbal Ring Mount:

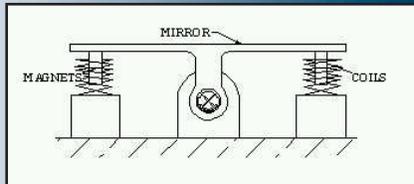
The Free-Flex® Pivot is particularly suited for omnidirectional applications. Also, the lack of lubrication permits operation in a hard vacuum. The pivot can operate at higher temperatures than other bearings and provides a relatively constant opposing spring force. Thus the actuator can be sized to accommodate only the force required to position the rocket motor without having to consider high friction caused by space welding.



Gimbal Ring Mount

• Scanning Mirror:

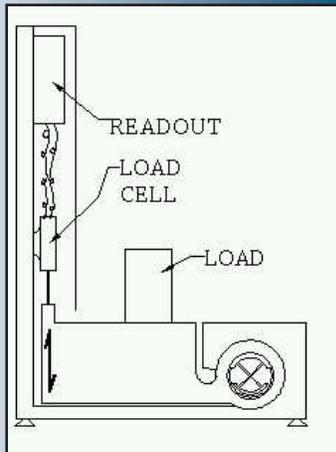
No friction and symmetrical springs allow smooth motion at the natural frequency, with low input required to sustain the oscillation.



Scanning Mirror

• Scale:

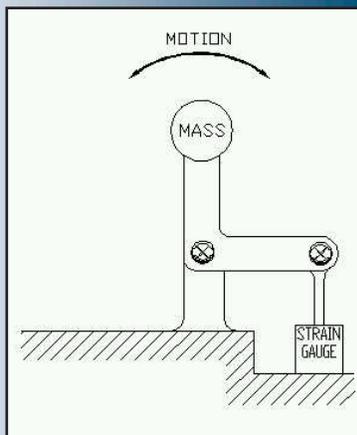
After selecting the proper pivot it is possible to design a scale that has no deflection in radial direction, all motion of the system is purely rotational.



Scale

• Vibration Accelerometer:

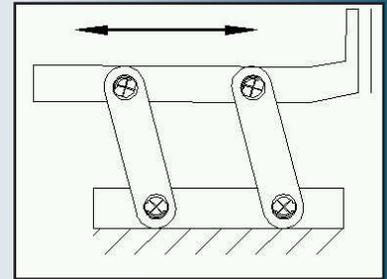
An accelerometer has to endure billions of cycles in its sensing lifetime. The Free-Flex® Pivot is ideal for this application as it can provide infinite life without maintenance. Because the pivot requires no lubrication, an extremely clean instrument is possible.



Vibration Accelerometer

• Perpendicular Mirror:

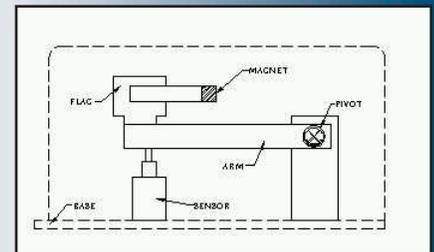
Four or eight Free-Flex® Pivots used in a parallelogram will maintain a mirror or other optics perpendicular to any surface for applications that require lateral motion.



Perpendicular Mirror

• Seismic Vibration Amplitude Sensor:

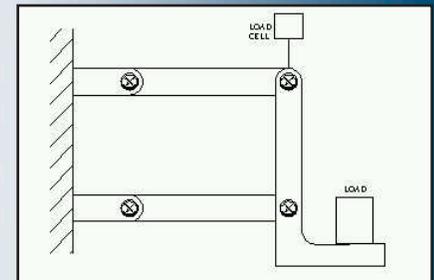
Free-Flex® Pivots are used as a damping system. A transducer converts the motion of the sensor base to a proportional signal.



Seismic Vibration Amplitude Sensor

• Weigh Station:

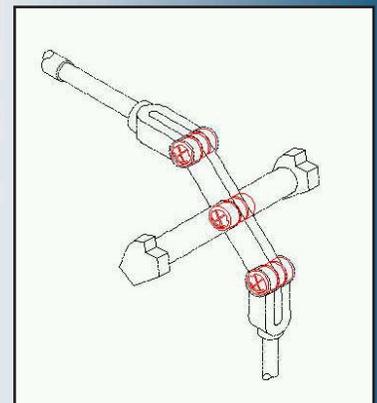
This represents an automatic filling mechanism which controls the quantities of materials packaged.



Weigh Station

• Throttle Linkage:

Pivots selected for different throttle systems are tailored to performance requirements for the particular application. For instance, we have aerospace applications where high temperature stability is as much a selection factor as are no lubrication and contamination tolerance. For industrial applications, pivot selection often permits elimination of assembly parts and results in a cost reduction.



Throttle Linkage

These illustrations are solely for the purpose of stimulating the designer in the application of Free-Flex® Pivots. No representation or warrant is made that the specific devices depicted in these illustrations may be manufactured, used or sold without infringing patents of others.