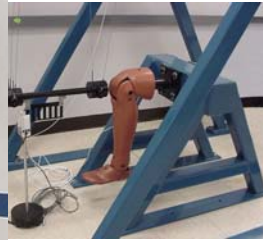




Knee Impact/Slider Test Stand

Model Number: TF-400- 0000



INTRODUCTION

The TF-400 Knee Impact / Knee Slider Test Stand is a dual system used for the calibration and testing of the Hybrid III series knee flesh and knee insert dynamic responses. The knee impact test evaluates the response characteristics of the knee assembly under a direct in-line impact at the centerline of the knee cap. The knee slider test evaluates the response characteristics of the sliding knee components or the relative motion of the tibia with respect to the femur bone.

DESCRIPTION

The probe is suspended from the upper structure by six (6) aircraft grade cables. Turnbuckles are spliced and swaged into the suspension cables to allow adjustment and repositioning of the probe when necessary. A precision velocity vane is attached to the under side of the probe and is used in conjunction with the infrared emitter/detector system to make accurate velocity measurements. A uniaxial accelerometer is affixed to the rear surface of the probe so that its sensitive axis is in-line with the centerline of the probe.

The Hybrid III knee assembly (knee flesh, rubber knee insert, knee casting, and femur load cell simulator) and lower leg assembly are attached to the mounting plate on the side of the impact base. The probe is drawn back and connected to the release. The probe is then released by a trigger on the release mechanism. On its free fall to the knee, the velocity vane passes between the infrared emitter and detector which generates a series of on/off pulses that can be converted to velocity by a data acquisition system.

The one uniaxial accelerometer, femur load cell and knee potentiometer required for this test are not included.

Dimensions	Fixture	Work Area
Length	8.0 ft	16.0 ft
Width	3.8 ft	4.0 ft
Height	9.5 ft	—

Standard Equipment

- Structural steel frame
- An “A” frame low profile impact base
- Mounting adapter for knee attachment
- Probe suspension cables with mounting hardware
- (2) probe release assemblies
- (2) velocity vanes
- (2) infrared velocity measurement systems
- Bubble Level

Optional Equipment

Knee Impact Adaptation Packages are available for the following dummies:

- Hybrid III 50th/Hybrid 95th
- Hybrid III 5th
- Hybrid III 10 Y.O.
- Hybrid III 6 Y.O.

Knee Slider Adaptation packages are available for the following dummies:

- Hybrid III 50th
- Hybrid III 5th
- Hybrid III 95th

SID Damper Adaptation Package