SYDOR TECHNOLOGIES

BIOKINETICS QUASI-STATIC HELMET RETENTION TESTER

COMPLEX MEASUREMENTS—CRITICAL RESULTS

FEATURES

- Easily portable with mounted frame and wheeled design
- Linear potentiometer integrated with data acquisition and software system
- In-line force transducer integrates with data acquisition and software system
- Integrates with Biokinetics' Helmet Impact Drop Tower System & Mass Properties Instrument

ABOUT THE BIOKINETICS QUASI-STATIC HELMET RETENTION TESTER

Biokinetics' Helmet Retention Tester under Quasi-Static conditions (HRT-QS) evaluates the overall strength and deflection of a helmet's restraint system under load. The apparatus can apply loads at a specified rate to the restraint system with a capacity of 4000 N (900 lbf). The system complies with international standards and is integrated with the Helmet Test Software (HTS) to simplify application of loads, data collection and reporting.

A helmet is placed on the headform and the retention strap routed under the jaw stirrup assembly. The HRT-QS pneumatically loads the retention system to the designated load. A linear potentiometer measures the retention strap elongation. A force transducer mounted in between the jaw stirrup and the linear actuator measures the applied load and the retention strap release force.

An instrumentation box contains the power supply for the linear actuator. The power supply is controlled by the HTS and allows for any load to be applied and maintained to the helmet retention for any given duration.

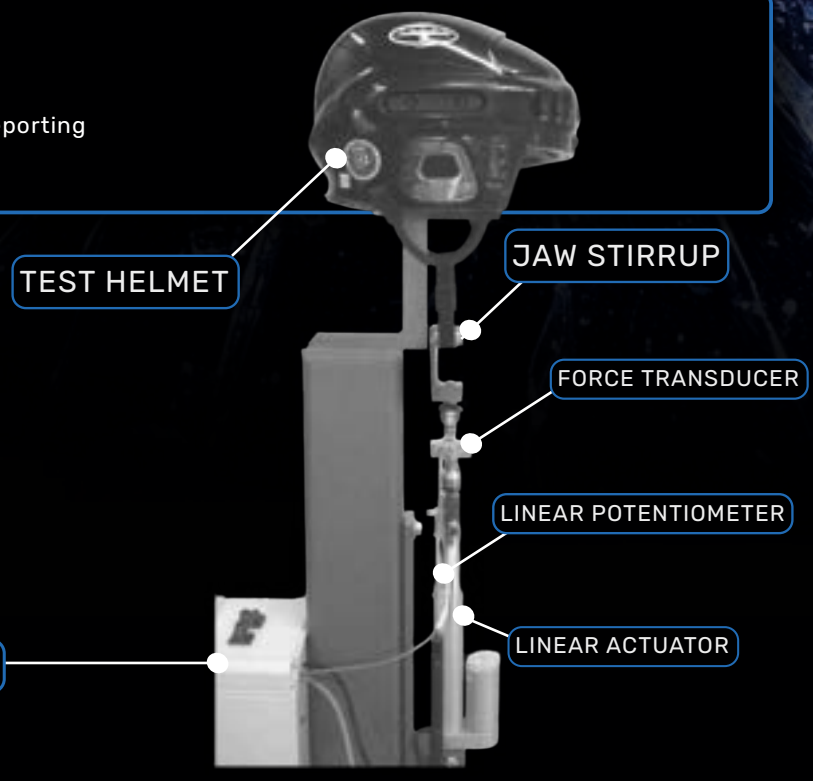
The quasi-static helmet retention tester was designed to evaluate the stretch of a retention system at a given load and load rate. The system also allows for the evaluation of the exact force and strap displacement when the strap either releases or fails. This is accomplished by varying the load and duration specification settings in the custom designed software.

PRODUCT SPECIFICATIONS

- DOT Headforms: A, C, and D sizes
- Half ISO Headforms: A, E, J, M O are optional
- Software Automation: Data collection, data analysis, and reporting
- Dimensions (H x W x D): 1.7 m x 0.6 m x 0.5 m
- Weight: 30 kg

Biokinetics

Sydor Technologies is a proud distributor for Biokinetics



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