

# Dynamic Research, Inc.

## IMPACT TEST LABORATORY

Dynamic Research, Inc. (DRI) has a fully equipped testing laboratory to meet all helmet testing needs. Our staff has over 15 years experience in the field of helmet design, evaluation and testing. Clients are provided with assistance in:

- Product development
- Prototype evaluation
- Product certification testing
- Quality control testing
- Accident and safety analysis

Complete certification and quality control test services can be provided for helmet standards published by the following organizations:

- CPSC
- ASTM
- DOT
- ISO
- ANSI
- SFI

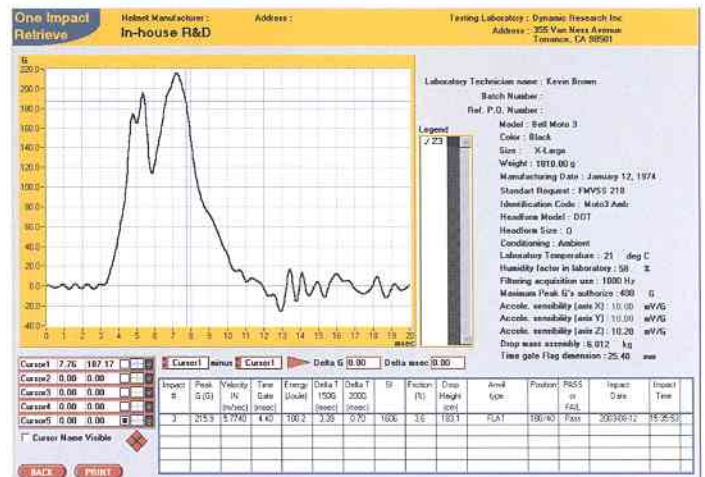
Helmet testing in accordance with all Snell Memorial Foundation standards is also available.



*Complete monorail test apparatus*



*Retention test apparatus*

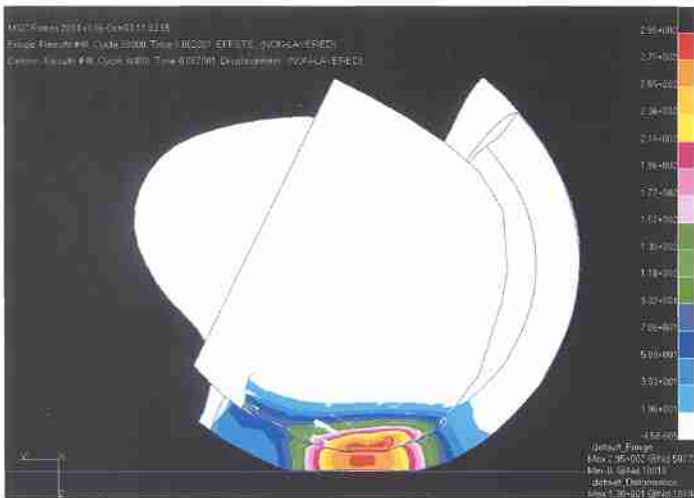


*Custom test software*



## FINITE ELEMENT MODELING

DRI has developed finite element models simulating standard impact tests of helmets that include appropriate material properties for liners and shells. This capability allows new ideas, materials and geometries to be evaluated prior to prototype and mold development. Helmet designs can be quickly optimized by performing computer simulations of standard and non-standard impact tests at a large number of impact locations on the helmet using a variety of material configurations. This methodology provides a cost-effective approach to helmet development in that helmet designs can be more completely evaluated in order to identify potential problem areas and improve helmet performance, potentially reducing the development time and the number of prototypes needed.



*Finite element model impact simulation*

## SPECIALIZED CRASH TEST DUMMIES

DRI also has specialized crash test dummies for various applications, including injury evaluation and protection system feasibility research. These crash test dummies are completely self contained and fully instrumented with up to 64 channels of test data. The headform alone is capable of measuring three dimensional neck forces and moments as well as three dimensional linear and rotational head accelerations.



*Specialized headgear testing*

DRI specializes in applied research, development and consulting in the areas of vehicle dynamics and control, man-machine systems, human factors, biomechanics and structural mechanics. For further information please contact us at 310-212-5211, visit our web site at [www.dynres.com](http://www.dynres.com), or email us at [info@dynres.com](mailto:info@dynres.com).