

# ADVANCED THOR 50% Male

## Advanced Frontal Test Dummy



**THOR (Test Device for Human Occupant Restraint) is an advanced frontal crash test dummy with improved biofidelic features developed through the direction of the National Highway Traffic Safety Administration (NHTSA).**

THOR has been primarily designed for whole-body assessment, utilizing expanded instrumentation.

The complete dummy is capable of bearing up to 120 sensors, making it a more effective test device for occupant crash evaluations, advanced restraint system assessments, and improved assessment of belt / bag interactions.

THOR's load sensing Melvin face design incorporates 5 uniaxial load cells, and the new neck permits frontal and lateral flexion, extension, and axial compression. The more humanlike thorax design utilizes upper and lower CRUX units, allowing chest compression measurements at four different points. DGSPs in the abdomen allow continuous 3D deflection measurements, increasing belt, airbag, and wheel rim interaction data.

Injury assessment of THOR's pelvis region and hip joint is accomplished using an accelerometer at the CG, left and right 3-axis acetabular load cells, and tape switches for left and right iliac loads. THOR also incorporates the Advanced Lower Extremities (THOR-LX) foot / ankle design.

THOR's overall physical proportions are similar to the Hybrid III 50<sup>th</sup> male, with a height of 69 inches and weighing approximately 168 pounds.

### Instrumentation includes:

- positioning sensors
- acetabulum load cells
- 3D abdomen penetration measurement
- 3D thorax deflection instruments
- Tilt sensors

*For information about additional instrumentation available for this test device or test dummy configurations specific to your needs, please contact the Customer Service Department at DENTON ATD, INC.*

### A few of the new advanced features of THOR include:

- a more human like thorax anthropometry
- new posture adjustment system
- multidirectional neck design
- restorable abdomen design
- more human like pelvic segmentation
- an improved impact response femur
- restorable load sensing

*Creating the New Standard in ATD's*