

CRASH SIMULATIONS SYSTEMS



ARIES possesses the know-how and experience to provide you with the most adapted simulation systems to your testing needs.

- Regulation compliance (ECE R16, R17, R44, R80, FMVSS, EuroNCAP, Whiplash, etc) or R&D testing.
- Heavy-duty system.
- Precise control of final velocity.
- Reliable and repeatable test results.
- Easy to use.
- Three different options for deceleration systems.
- HyGe Sleds (Acceleration System) under request.



MAIN FEATURES

- Bungee cords or AC motor propulsion system.
- Maximum speed: 80 km/h.
- Sled running over crash track option available.
- Maximum payload: 2,000 kg. (*)
- Maximum deceleration: 80 g.
- Minimum track length: 25 m.



*Different specifications under request

DECELERATION SYSTEMS

HYDRAULIC PROGRAMMABLE (HY-PRO) BRAKE:

Aries programmable Hydro Brake provides with the maximum flexibility. Pulses can be easily configured via software. The braking force is controlled by a servovalve piloted by a Real Time Controller. The system is suitable for all regulations including Euro NCAP whiplash.



BENDING-BAR BRAKE:

A set of steel bars generates the deceleration pulse required depending on their size and distribution. When the sled front nose crashes into them, the bars deform and dissipate the sled energy. This system gives a greater flexibility in the choice of deceleration pulses than the polyurethane-tube brake.



POLYURETHANE TUBE BRAKE

This is the deceleration method recommended by UN ECE regulations for head-on impact simulation seat belt (R16) and child restraints (R44) test.

The required deceleration pulse is achieved by re-usable parallel polyurethane-tube and a set of steel shafts fitted to the sled. The different deceleration pulses are obtained by combining the length and rigidity of the tubes, the impact speed and the shape of the shaft ends.



PROPULSION SYSTEM

Aries sled systems are propelled by the traditional bungee cords system or by AC motor. To withstand with Euro NCAP requirements (max. acc. > 0.3 g) the AC motor solution combined with a length of 75 m is necessary.



AUXILIARY EQUIPMENT

ARIES offers a range of auxiliary systems to complete your test facility:

- HMI lighting System.
- Speed Measurement Device.
- Airbag Firing Unit Box (Rugged Design: Up to 110 g).
- High Speed Filming System.
- Data Acquisition System.

