

The specification used for the develop the AE-MDB deformable impact barrier has been taken from the Euro-NCAP document ‘AE-MDB Specification, Version 1.0’, dated 26th February 2013.

The AE-MDB was adopted by EuroNCAP and in 2015 replaced the Advanced-2000 barrier. It is intended to be used alongside the new WorldSID dummy. This barrier uses the same manufacturing principles as the side impact barrier Advanced-2000.

Specifications

Element Type	Number of Elements	Timestep	Validation Code	Regulation Test	Regulation Speed
Solid	73 302	1.2E-6sec	R9.2.0, R7.1.2	UN R95 Lateral Collision Protection	50kph

Validation

The LS-DYNA model calibration has been done using the test results provided by Cellbond for a 35kph dynamic impact against a Rigid Wall. The test involves the barrier on a trolley impacting a rigid wall.

The force-deflection curves (generated from model`s analyses and tests) for the individual block of the barrier have been compared. The results have also been checked against the force-deflection corridors from the specification document.

This validation work has been carried out in both SMP and MPP versions of LS-DYNA R9.2.0 and R7.1.2 to ensure the performance and accuracy.

