

The Full Width Deformable Barrier (also known as Full Width Compatibility Barrier) was proposed by the Vehicle Crash Compatibility Project (VC-Compact) and is developed by Cellbond on behalf of TRL (Transport Research Laboratory, UK).

This barrier was been developed to work alongside the EEVC Frontal Offset Barrier to fulfil needs for research on the compatibility of vehicle fronts, their aggressivity and partner protection.

Specifications

Element Type	Number of Elements	Timestep	Validation Code	Regulation Test	Regulation Speed
Solid	117 233	1.2E-6sec	R7.1.2	-	-

Validation

Two tests have been selected for correlating the LS-DYNA FWDB model: a flat wall impact at 17kph and the TRL Sled Test at 40kph. The tests involve the impactors on a trolley impacting the fixed FWDB barrier. For the Flat Wall case, the correlation has been carried out using test results provided by Cellbond. The test results used in the Sled Test correlation have been taken from a number of reports published by TRL Limited.

The force - deflection curves generated from model`s analyses and tests have been compared.

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

