

This method consists of applying a known force to the top of a pile and analysing its frequency and amplitude response. The pile is struck with a hammer containing a force sensor, generating a compression wave that travels all the way along its length. When the wave reaches the bottom of the pile it is reflected back towards the surface, thus causing a slight movement in the top. Any change in impedance ($z=rcA$) in the top of the pile is recorded on graphs.



By keeping records of times and frequencies, Euroconsult new technologies can conduct a combined analysis of the reflectogram and the mobility curve that provides a graphic readout on the pile known as an "impedance profile". This analysis gives rise to a representation of the vertical geometry of the pile. We currently have four mechanical impedance units equipped with sensorised hammers which use echo testing to simplify mobility curve analysis, which provide impedance profiles thanks to their high resolution and their calculation programs.