
Piezo injectors

The piezo principle is an ideal complement for common rail fuel injection. Piezo crystals change their structure in a few thousandths of a second by expanding slightly when an electrical voltage is applied to them. Several hundred piezo wafers are stacked one above the other in the injector. As this stack expands, linear movement takes place and is transmitted directly to the injector needle, with no mechanical linkage in between.

The injectors close again after mere thousandths of a second. In this way, very small amounts of fuel weighing as little as eight-tenths of a milligram (less than one thousandth of a gram) can be injected and also very finely distributed thanks to the high pressure and precise nozzle geometry.

Status: 2011