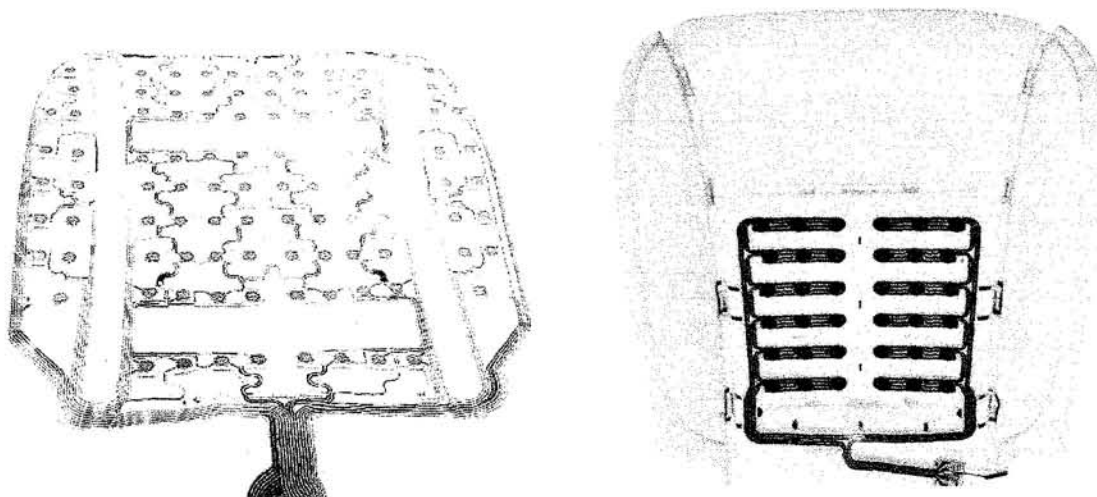


## Seat Occupancy Detection (OC-3 Mat)

Legislation in the USA makes it imperative for the system employed to detect occupancy of the front passenger seat to distinguish between occupancy by a small person and use of the seat to anchor a child restraint system.

A straightforward seat occupancy detector recognizes a certain weight (>12 kg) as proof that the seat is occupied. In order to meet legislative requirements, the seat occupancy detector (SBE) was developed into an intelligent occupant classifier (Occupant Classification OC). This was achieved by means of the following measures:

- By a larger number of sensor elements
- By detection over the entire seat area
- By an intelligent electronic analyzer



Comparison between the OC-3 sensor mat (left) and the conventional seat occupancy detection mat (right)

The OC-3 mat is capable of distinguishing between a one-year-old child in a child's seat and a light person (approx. 45 kg).

The OC-3 mat is integrated into the seat area of the passenger seat. The OC-3 mat consists of conductors with pressure-dependent resistor elements (FSR, or Force Sensitive Resistance elements). The conductors are connected to the electronic analyzer.