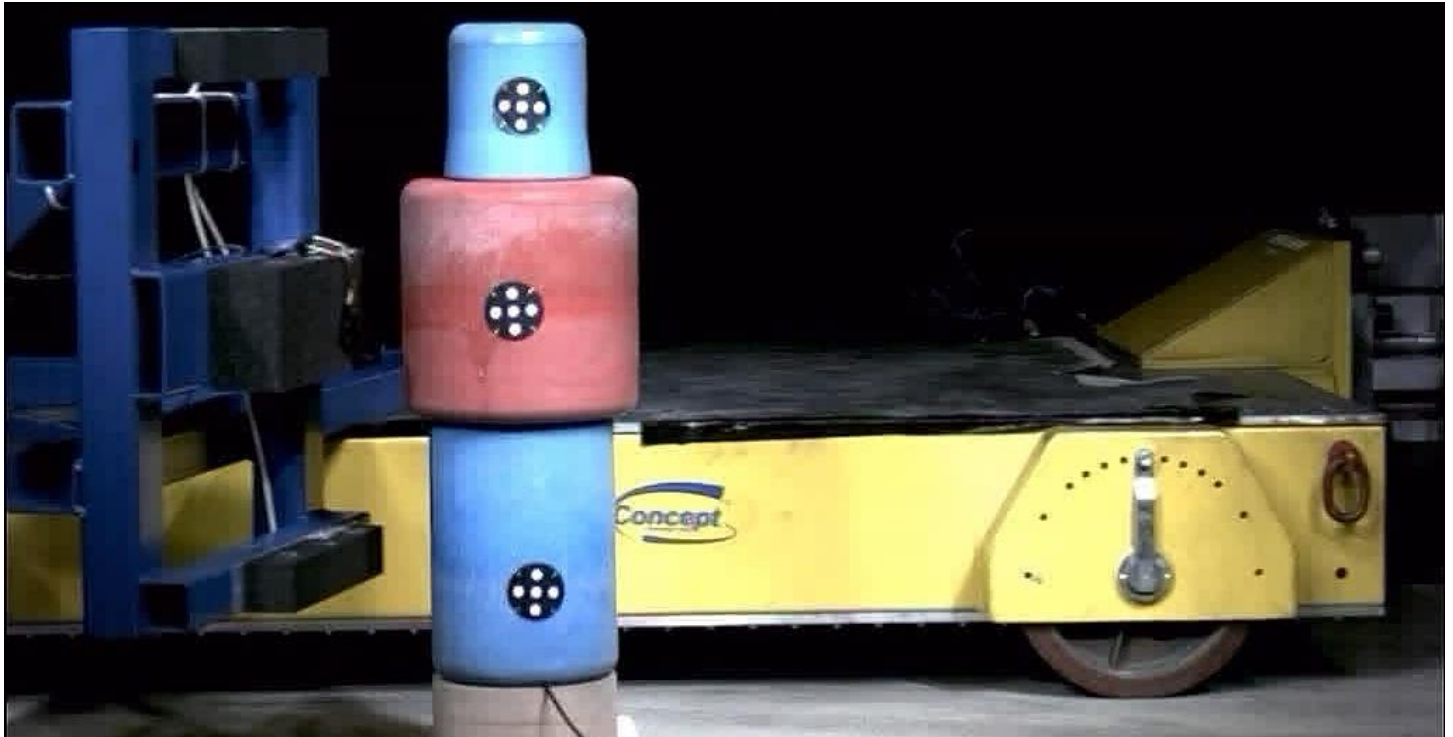


# PDI Pedestrian Detection Impactor



**Concept**  
TECHNOLOGIE



Concept developed the Pedestrian Detection Impactor in collaboration with the working group „AK Sensorik“ by order of PDB for sensing of the lower minimum triggering level of a pedestrian detection sensor system (Assumption: 6y Dummy).

**pdb** - Partnership for Dummy  
Technology and Biomechanics

**AK Sensorik**

**Audi  
AG**

**BMW  
Group**

**Daimler  
AG**

**Porsche  
AG**

**Volks-  
wagen AG**

## Benefits at a Glance:

- ✓ Impactor with low mass
- ✓ Simple, robust and maintenance free impactor
- ✓ FE- Model for LS- Dyna, Pam Crash, Abaqus and Radioss (after V5)
- ✓ Humidity resistant foam material
- ✓ Temperature resistant foam material from -30° up to +70°C (+100°C)
- ✓ Design and robustness from 20 km/h up to 55 km/h

# Concept - Pedestrian Detection Impactor

The Pedestrian Detection Impactor has been developed iterative via virtual process in consideration of robustness compared to the forces during testing. The Pedestrian Detection Impactor is a simple, robust, temperature-independent and maintenance free impactor. Based on the precise design of the configuration a good illustration of the application of the energy, a good illustration of the application of the force and high stability regarding high test velocities and overrun are guaranteed.

Due to the exchangeability of the wear parts (foams) it is possible to keep the costs for testing especially low.

The Pedestrian Detection Impactor consists of 4 elements:

- Carbon tube with lead core
- Internal foam part
- External foam part
- Plug for carbon tube at the bottom (protection against damage)

Furthermore the impactor is positioned on a socket to guarantee the relevant height. To avoid damages at the vehicle the socket is also made of foam material.

## Technical Data:

### Central tube:

Carbon fibre composite material with a smooth passage of the lead filled part to the lower end of the tube.

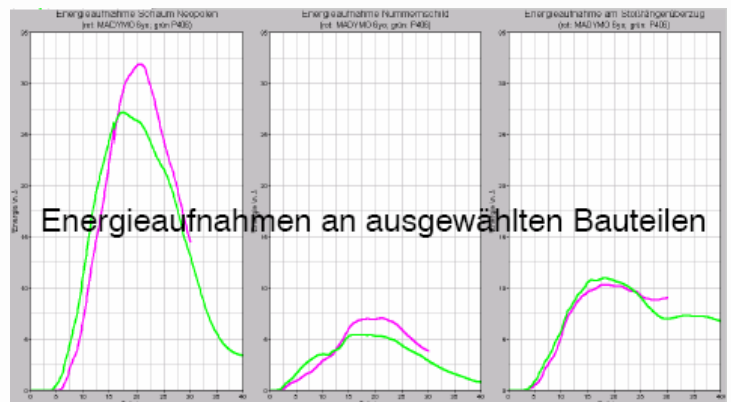
### Dimensions:

Height (incl. socket):	730 mm
Height Socket:	70 mm
Width:	240 mm

### Mass:

Overall mass (incl. lead core):	~9.9kg
Lead Core:	~3.8kg

<b>Operation temperature:</b>	-30°C up to +70°C (ca. +100°C)
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Energy absorption of selected parts

