



# Pedestrian Protection

## Overview

The facility is used for testing components and vehicle frontal structure for the development of active and passive protection systems. Tests are performed to evaluate the protection potential for pedestrians during an impact or to measure the sensing data for active systems.

Tests may be performed with various impactors, simulating pedestrian elements and other obstacles in order to meet legislative and development requirements.

### The following Impactors are available

- > Head impactor (adult impactor, child impactor and child/small adult impactor)
- > Upper Leg impactor according to WG17
- > Lower Leg impactor according to WE17
- > Child leg PDI-1 and PDI-2 "lower limit" Impactor
- > Various misuse impactors, e. g. small animals, balls, gravel impacts, beams

### The pedestrian protection tests are performed according to different laws, specifications and test procedures

- > Regulation (EC) No 78/2009 with UN R127.1, No 631/2009 Pedestrian Protection
- > Euro NCAP
- > Japan NCAP
- > Japan MLIT
- > GTR No. 9
- > Specifications of active protection systems

### Technical Data

- > Hydraulic acceleration cylinder with closed loop regulation of acceleration on the working piston
- >  $V_{\max} = 15 \text{ m/s}$  at  $m = 15 \text{ kg}$   
Velocity accuracy:  $< 0.2 \text{ km/h}$  and  $< 1\%$  ( $v > 24 \text{ km/h}$ )
- > Motor powered positioning unit, computer controlled with 4 degrees of freedom in motion
- > Coordinate transformation onto vehicle possible
- > Positioning accuracy  $+ 1 \text{ mm}$
- > Hit deviation  $< 5 \text{ mm}$
- > 6-channel data unit with 14 bit resolution
- > Microsoft Windows based measuring and analysing software and data base
- > Control of additional measurements and film triggering

