

ISO MME

Pedestrian Impactor Coding

V1.6

Dipl.-Ing. D. Vetter, IAT mbH



Version History

(1)

- **V1.0 October 2003:**
 - first official version
- **V1.1 February 2004:**
 - Codes have been changed and frozen for the Impactors
 - For the upper legform impactor the main location LEFR is used for all measurements and the calculated value codes.
 - For the legform impactor the main location FEMR is used for measurements and result values of the upper part of the impactor and the main location TIBI is used for measurements and result values of the lower part.
 - Changed Test object in all codes from "0" to "D"
 - "D" does mean in the current version "dummy part/dummy impactor"
 - Test object is needed to store impact velocity and may also impactor mass
 - There is a descriptor needed to store the impact angle for the upper legform impactor
 - In Version 1.4 this information can be integrated in the <testnumber>.mme file using "optional descriptors".
 - The optional descriptor will be ".Pitch angle of test object n" (n = number of the impactor).
- **V1.2 March 2004:**
 - Additional Coding for Calculated Channel of bending angle at Lower Legform impactor:
 - D0TIBI00CCPIANYC Calculated Channel
 - D0TIBI00CCPIANYX Calculated Value Code

→ V1.3 September 2004:

- Final changes of Codes for first release in ISO MME RED's V1.4:
- Main Location for all kind of Head Impactors now "HEAD"
- Main Location for all measurements on the Upper Leg Impactor now "FEMR"
- "PI" in FL3 no longer used, defined new FL3 codes to describe type of pedestrian impactor:
 - PA = Adult Head Impactor (4,8kg)
 - PB = Head Impactor according to ACEA (3,5kg)
 - PC = Child Head Impactor (2,5kg)
 - PU = Upper Leg Form
 - PL = Lower Leg

→ V1.4 September 2004:

- Final changes of Codes for first release in ISO MME RED's V1.4:
Main Location for all calculated channels of Knee Displacement and Knee Bending Angle will now have the Main Location "KNEE" therefore the names differ from the measurements channels but conform to the related criteria names
- All codes containing "00" in FL1 and/or FL2 can also contain numbers to enumerate different impact points on the target vehicle. Numbers in the calculated value codes and the corresponding channels must comply. Possible positions in the codes are given in italics. Respect that **HEAD0000ACRA offers FL1 and FL2 while **HICR0015ACRX just offers FL1! Therefore just FL1 is available for enumeration!



Version History

(3)

→ **V1.5 April 2005:**

→ Introduced additional FL3 coding for JARI Head Forms:

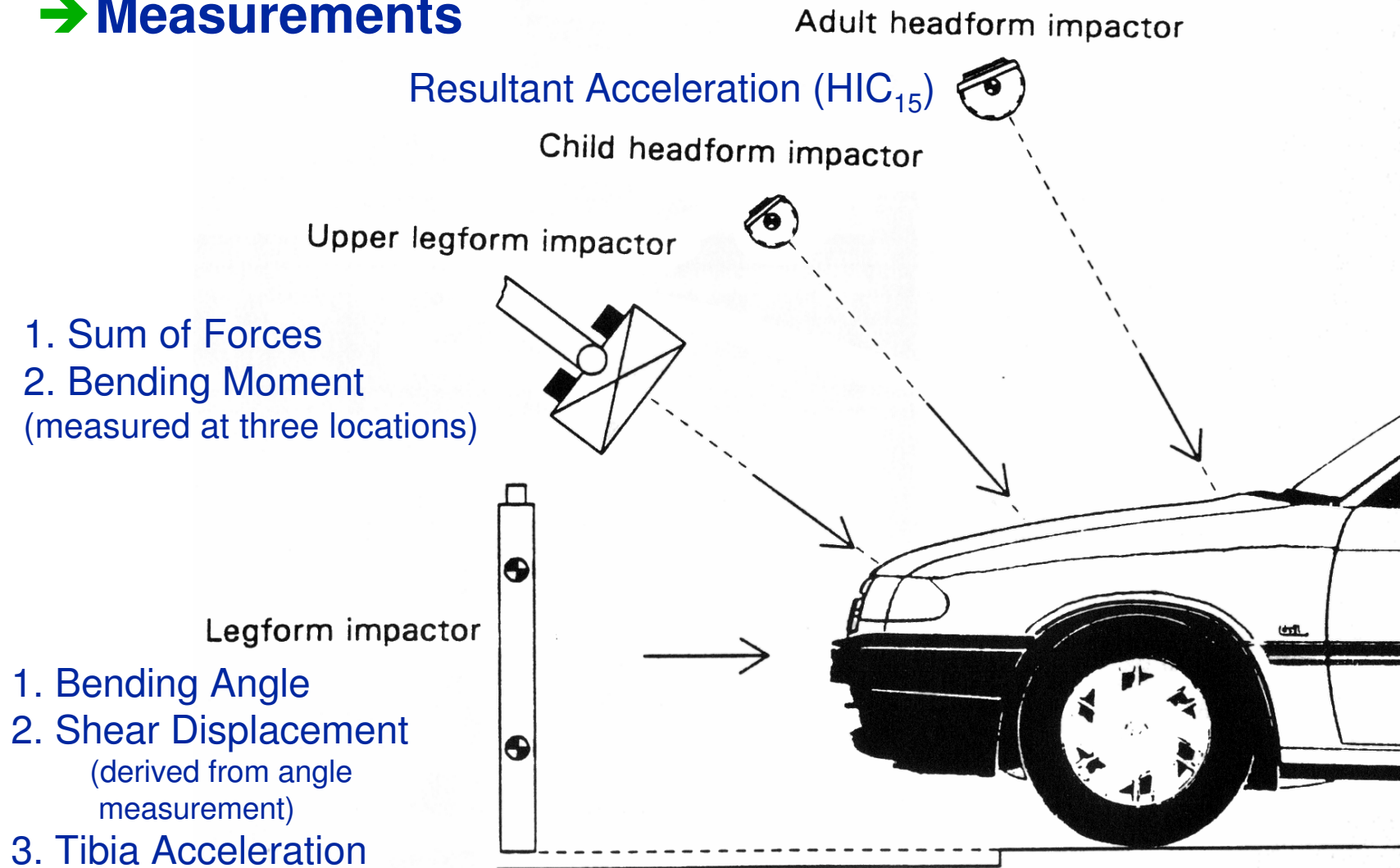
- PJ = JARI Headform Adult (4,5 kg)
- PS = JARI Headform Small (3,5 kg)

→ **V1.6 May 2007:**

- Changed Code for Bending angle measurement. Now contains FL1 with "UP" instead of "00". Location is on the same height level as Tibia acceleration measurement that already has got the FL1 code as "UP".

old: D0TIBI0000PLANYC → new: D0TIBI**UP**00PLANYC

→ Measurements



→ Head Acceleration ACR

Adult:

D0HEAD0000PAACXA

D0HEAD0000PAACYA

D0HEAD0000PAACZA

D0HEAD0000PAACRA

ACEA head impactor:

D0HEAD0000PBACXA

D0HEAD0000PBACYA

D0HEAD0000PBACZA

D0HEAD0000PBACRA

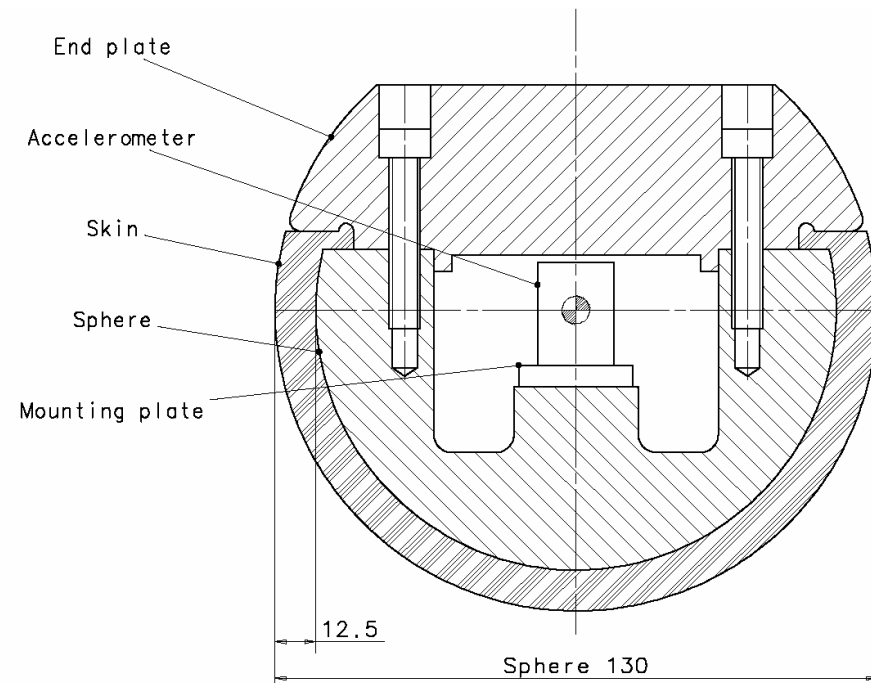
Child:

D0HEAD0000PCACXA

D0HEAD0000PCACYA

D0HEAD0000PCACZA

D0HEAD0000PCACRA



→ Calculated Value Codes

D0HICR0015PA00RX, D0HICR0015PB00RX, D0HICR0015PC00RX

→ Head Acceleration ACR

Adult (4,5kg) :

D0HEAD0000PJACXA

D0HEAD0000PJACYA

D0HEAD0000PJACZA

D0HEAD0000PJACRA

Small head (3,5kg) :

D0HEAD0000PSACXA

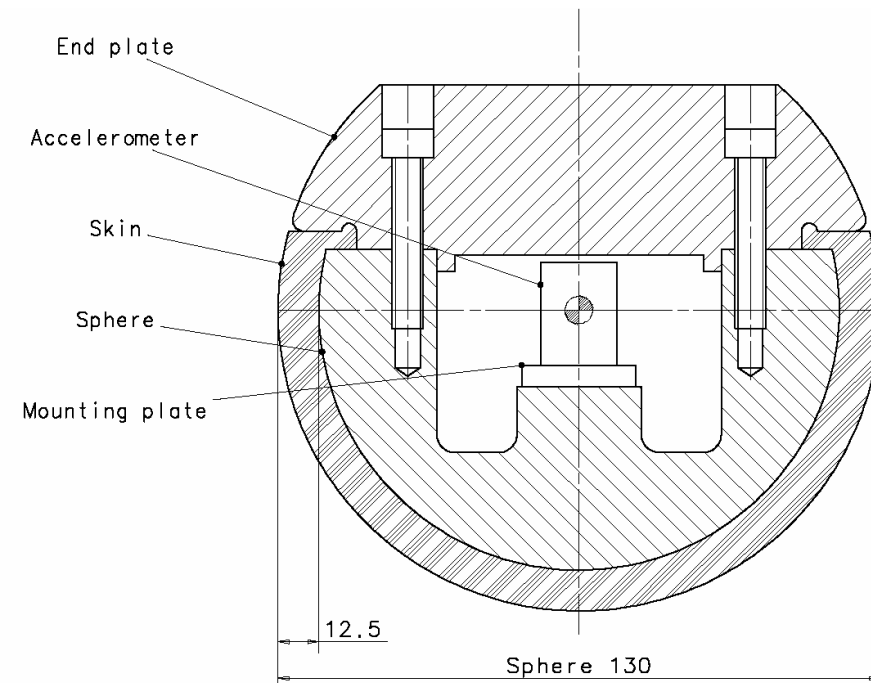
D0HEAD0000PSACYA

D0HEAD0000PSACZA

D0HEAD0000PSACRA

→ Calculated Value Codes

D0HICR0015PJ00RX, D0HICR0015PS00RX



→ Shear Force FOX

D0FEMRUP00PUFOX

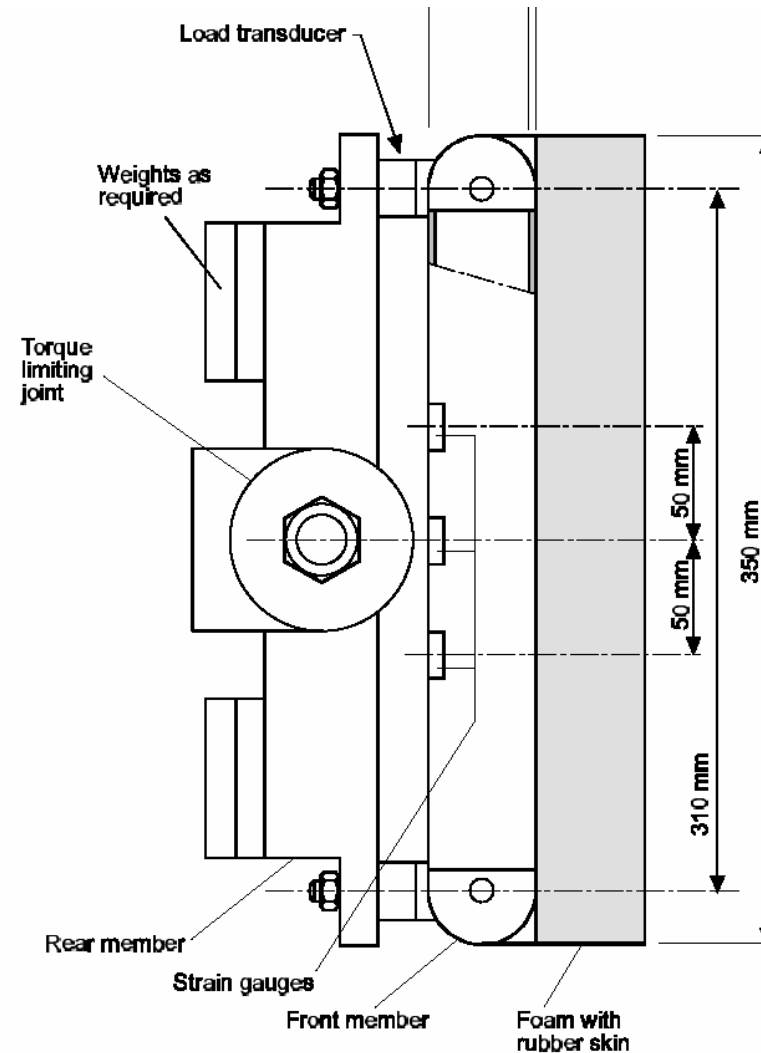
D0FEMRLO00PUFOX

Sum of Shear Force

D0FEMRSU00PUFOX

→ Calculated Value Code

D0FEMRSU00PUFOXX



Pedestrian Impactor Testing

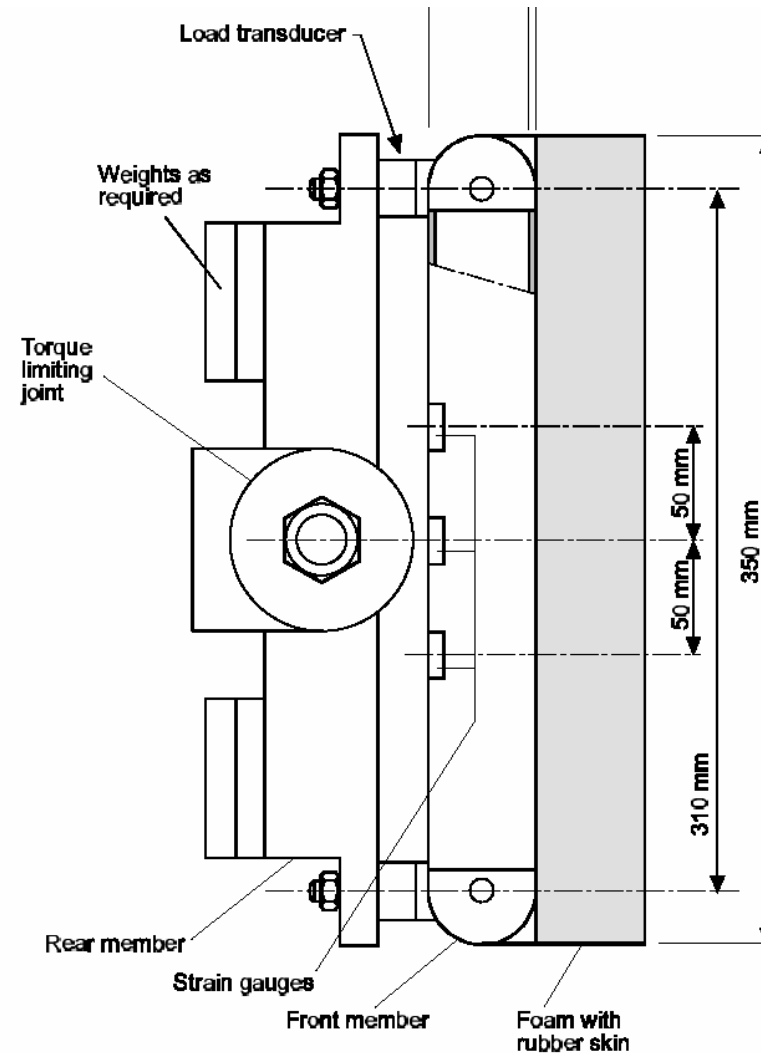
Upper Leg Impactor (2)

→ Bending Moment MOY

D0FEMRUP00PUMOYC,
D0FEMRMI00PUMOYC,
D0FEMRLO00PUMOYC

→ Calculated Value Codes

D0FEMRUP00PUMOYX,
D0FEMRMI00PUMOYX,
D0FEMRLO00PUMOYX



Pedestrian Impactor Testing

Legform Impactor (1)

→ Shear Displacement DSX

Displacement will be calculated from bending angle measured in the femur

D0FEMR0000PLANYC

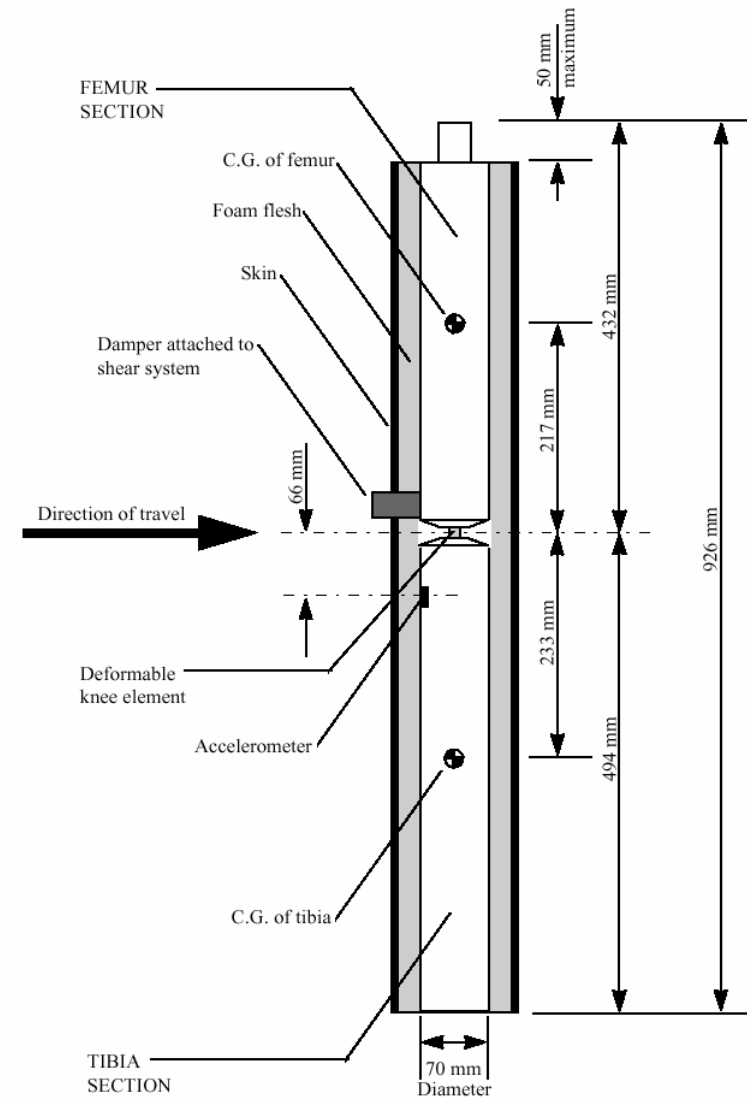
→ Calculated Channel Code

D0KNEE0000PLDSXC

Shear displacement channel is calculated from the angle measurement **D0FEMR0000PLANYC!**

→ Calculated Value Code

D0KNEE0000PLDSXX



Pedestrian Impactor Testing

Legform Impactor (2)

- **Bending angle ANY**
(measurement)
(old: D0TIBI0000PLANYC)
D0TIBI**UP**00PLANYC
- **Bending angle ANY**
(effective, calculated)
D0KNEE0000PLANYC
- **Calculated Value Code**
D0KNEE0000PLANYX
- **Tibia acceleration ACX**
measured at upper tibia
D0TIBIUP00PLACXC
- **Calculated Value Code**
D0TIBIUP00PLACXX

