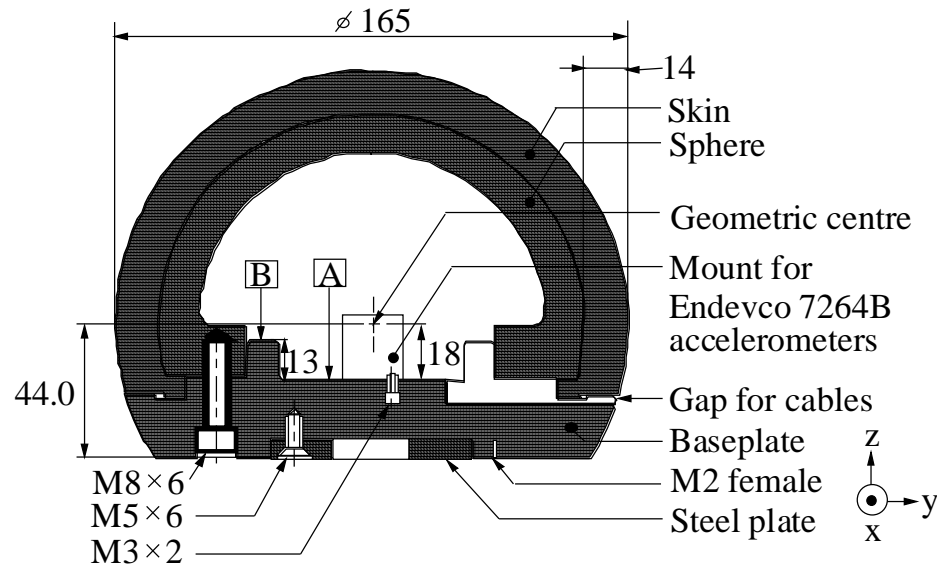


Design of JAMA-JARI Pedestrian Headform Impactor

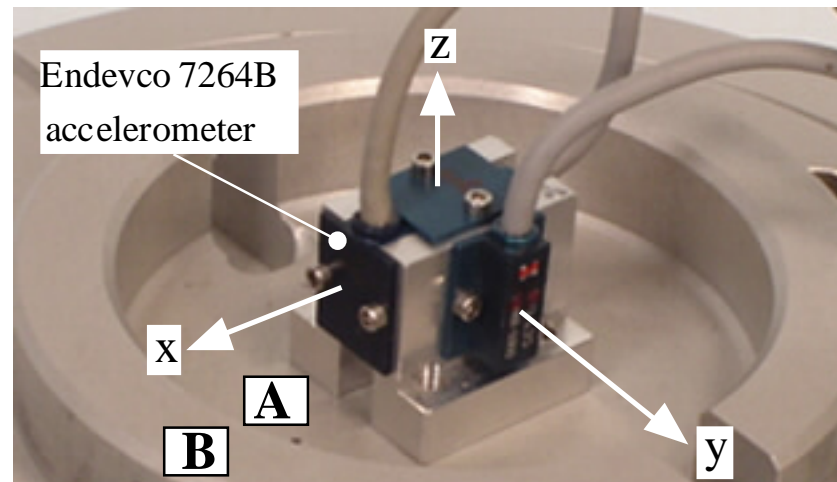
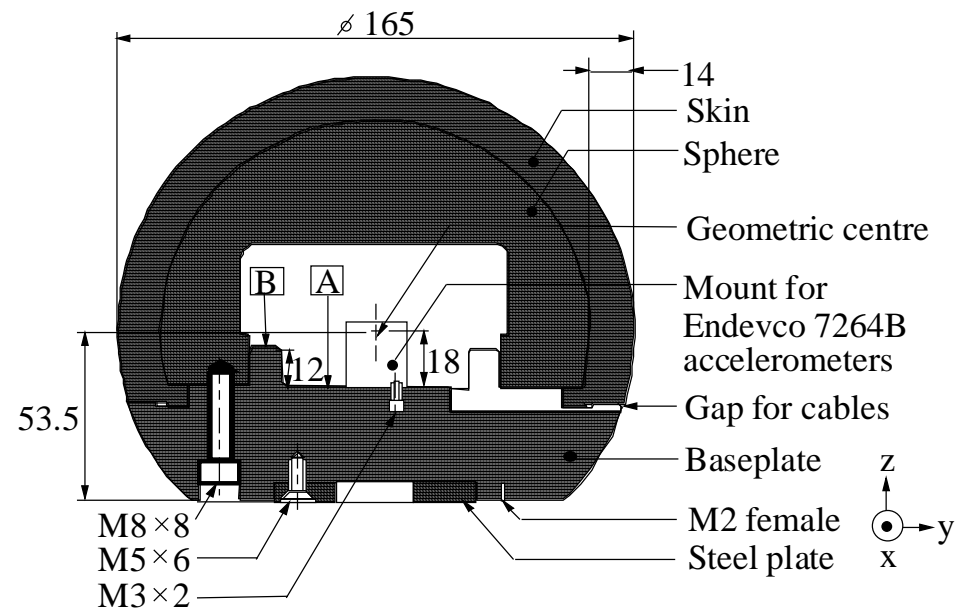
Japan Automobile Research Institute (JARI)
Japan Automobile Manufacturers' Association, Inc.
(JAMA)

JAMA-JARI Headform Impactor Ver. 1

Child



Adult



**Endevco 7264B
undamped
accelerometers**

Result of physical values measured by JAMA-JARI child head-form impactor Ver.1

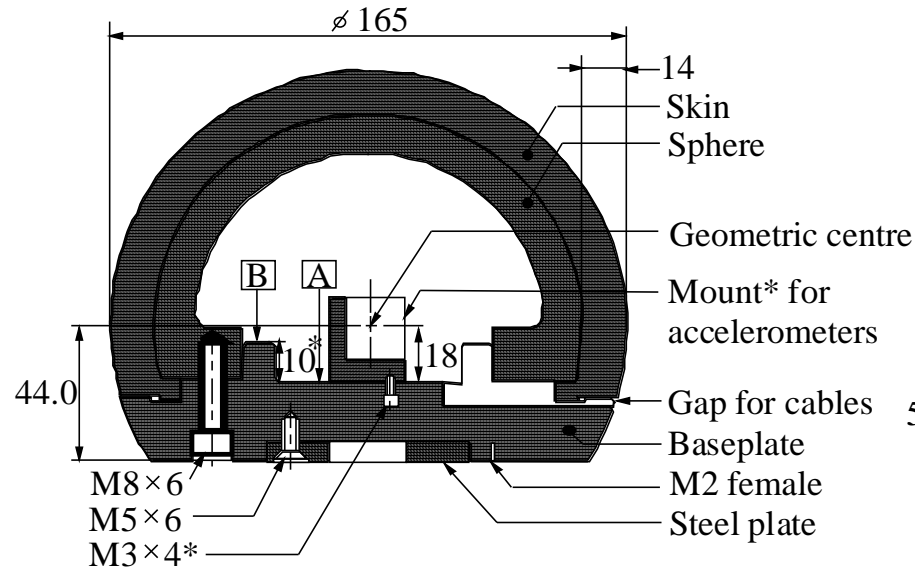
Parameter	IHRA	Manufactured prototype	
1) Mass	3.5 ± 0.07 kg	3.504 kg	✓
2) Diameter	165 ± 1 mm	164.5 mm	✓
3) Drop test corridor	245 - 300 G	Ave. 282 G	✓
4) Distance between C.G and Ge.C.	± 2 mm	0.4 mm	✓
5) 1st natural frequency	Over 5000 Hz	7424 Hz	✓
6) Moment of inertia	0.0075 to 0.0200 kgm ²	0.0089 kgm ²	✓
7) Distance between S.M.L. and Ge.C.	± 10 mm	Max. 8.5 mm	✓
	± 1 mm	0.4 mm	✓

Result of physical values measured by JAMA-JARI adult head-form impactor Ver.1

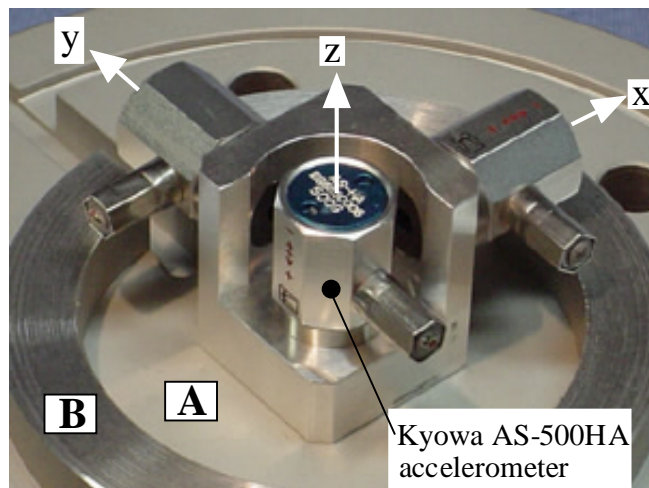
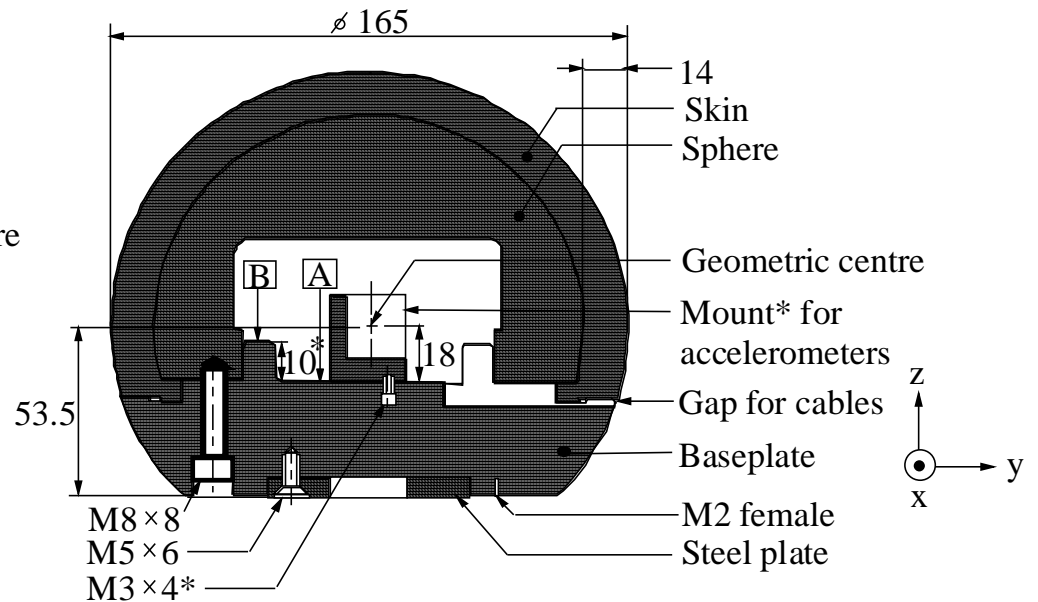
Parameter	IHRA	Manufactured prototype	
1) Mass	4.5 ± 0.10 kg	4.494 kg	✓
2) Diameter	165 ± 1 mm	164.5 mm	✓
3) Drop test corridor	225 - 275 G	Ave. 255 G	✓
4) Distance between C.G and Ge.C.	± 2 mm	0.4 mm	✓
5) 1st natural frequency	Over 5000 Hz	8496 Hz	✓
6) Moment of inertia	0.0075 to 0.0200 kgm ²	0.0115 kgm ²	✓
7) Distance between S.M.L. and Ge.C.	± 10 mm	Max. 8.5 mm	✓
	± 1 mm	0.4 mm	✓

JAMA-JARI Headform Impactor Ver. 2

Child



Adult



Kyowa AS-500HA damped accelerometers

**<J-NCAP headform test protocol>
It is mandatory to use damped accelerometer.**

Result of physical values measured by JAMA-JARI child head-form impactor Ver.2

Parameter	Japan MLIT	Manufactured prototype	
1) Mass	3.5 ± 0.07 kg	3.537 kg	✓
2) Diameter	165 ± 1 mm	164.2 mm	✓
3) Drop test corridor	245 - 300 G	Ave. 275 G	✓
4) Distance between C.G and Ge.C.	± 2 mm	0.0 mm	✓
5) 1st natural frequency	Over 5000 Hz	5168 Hz	✓
6) Moment of inertia	0.0075 to 0.0200 kgm ²	0.0089 kgm ²	✓
7) Distance between S.M.L. and Ge.C.	<i>± 30 mm</i>	<i>Max. 27.7 mm</i>	✓
	± 1 mm	0 mm	✓

Result of physical values measured by JAMA-JARI adult head-form impactor Ver.2

Parameter	Japan MLIT	Manufactured prototype	
1) Mass	4.5 ± 0.10 kg	4.527 kg	✓
2) Diameter	165 ± 1 mm	164.2 mm	✓
3) Drop test corridor	225 - 275 G	Ave. 260 G	✓
4) Distance between C.G and Ge.C.	± 2 mm	0.2 mm	✓
5) 1st natural frequency	Over 5000 Hz	5264 Hz	✓
6) Moment of inertia	0.0075 to 0.0200 kgm ²	0.0111 kgm ²	✓
7) Distance between S.M.L. and Ge.C.	± 30 mm	<i>Max. 27.7 mm</i>	✓
	± 1 mm	0 mm	✓