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**Road vehicles — Anchorages in vehicles  
and attachments to anchorages for child  
restraint systems —**

Part 1:

**Seat bight anchorages and attachments**

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AMENDMENT 3 Specifications for the  
detection of use of ISOFIX CRS

*ISO 13216-1:1999/Amd 3:2006*  
*Véhicules routiers — Ancrages dans les véhicules et attaches aux*  
*ancrages pour systèmes de retenue pour enfants —*

*Partie 1: Ancrages près de la jonction dossier-coussin d'assise et*  
*attaches*

*AMENDEMENT 3: Spécifications pour la détection de l'utilisation de*  
*systèmes de retenue pour enfants ISOFIX*



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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

Amendment 3 to ISO 13216-1:1999 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection systems*.

ISO 13216-1 describes a universal system for anchoring child restraint systems to vehicles.

The purpose of this system is to improve the overall safety performance of child restraints, particularly by improving the convenience of installation and reducing the risk of misuse.

To further increase the child security, solutions to recognize the use of child seat complying with the ISOFIX system, when fitted in a vehicle seating position equipped with airbags and to allow the disconnection of the airbags in the event of impacts are studied by car manufacturers.

Annex C hereafter describes a basic solution allowing detection with a reliable manner the presence of an ISOFIX child seat, when fitted into a vehicle.

**WARNING — The purpose of Annex C is not to provide a method of verification of correct CRS attachment in the vehicle.**

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# Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems —

## Part 1: Seat bight anchorages and attachments

### AMENDMENT 3: Specifications for the detection of use of ISOFIX CRS

Page 12, 5.2.2

Modify 5.2.2 as follows.

#### 5.2.2 Dimensions

Dimensions for the portion of the CRS connector that engages the anchorage bar shall not exceed the maximum dimensions given by the envelope in Figure 8.1 and not be less than minimum dimensions given in Figure 8.2.

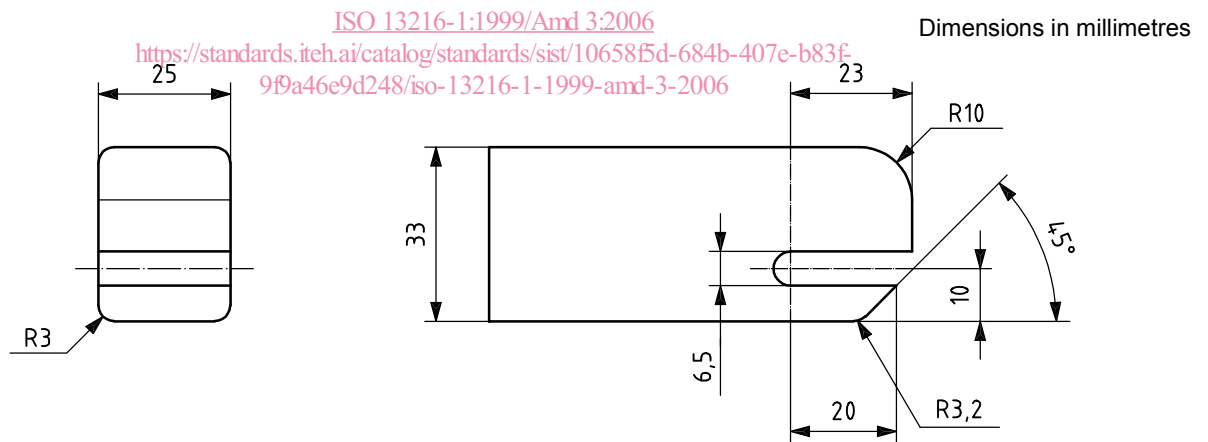


Figure 8.1 — Maximum dimensions of the connector

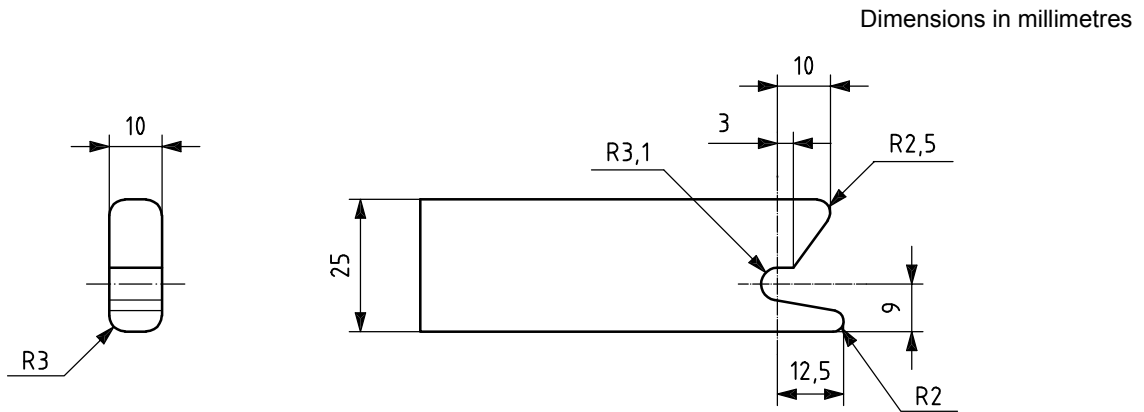
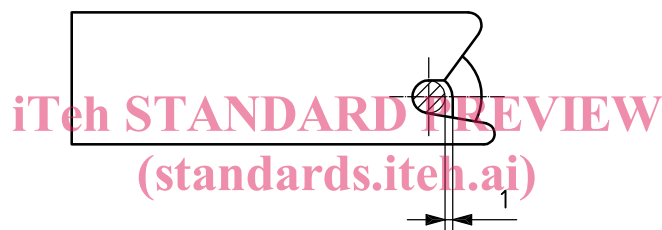


Figure 8.2 — Minimum dimensions of the connector

In the locked position around the ISOFIX bar, the maximum clearance between latch and bar shall not be greater than 1,5 mm (see Figure 8.3).



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Key

1 maximum clearance = 1,5 mm

Figure 8.3 — Maximum clearance between latch and ISOFIX bar

After Annex B, page 18, add Annex C as follows.

## **Annex C** (normative)

### **Method for the detection of use of ISOFIX CRS**

#### **C.1 Scope**

The present annex is applicable to ISOFIX CRS and specifies a method to detect the use of such ISOFIX CRS into vehicles.

#### **C.2 Principle**

The principle of detection is based on the variation of a magnetic field when the ISOFIX connector of the child seat moves forward the ISOFIX anchorage bar of the vehicle.

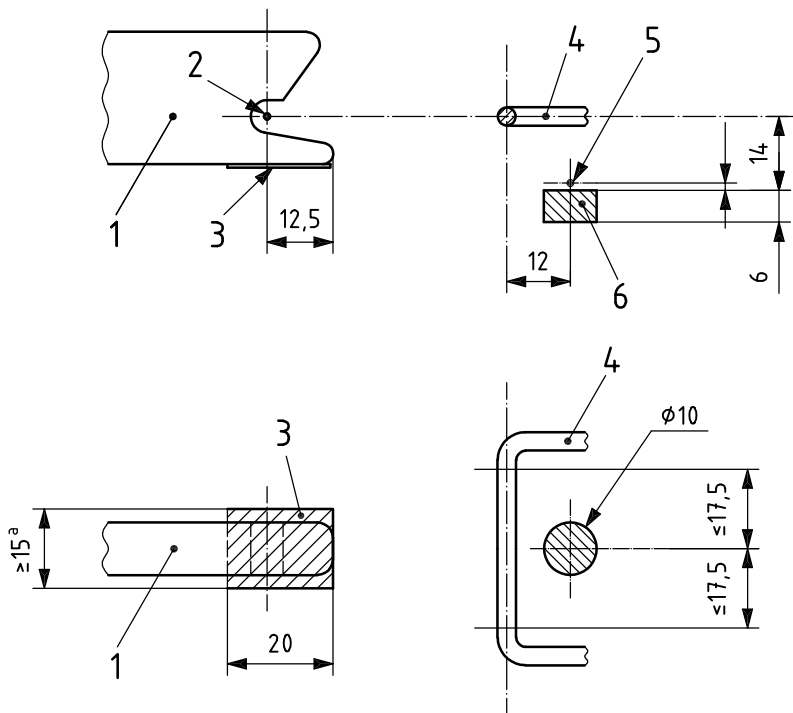
#### **C.3 Apparatus**

See Figure C.1.

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Dimensions in millimetres



**Key**

- 1 CRS ISOFIX connectors
- 2 point B
- 3 ferromagnetic plate
- 4 ISOFIX anchorage bar
- 5 measurement point A
- 6 ferrite magnet – remanent field  $F_r = 0,4 T$

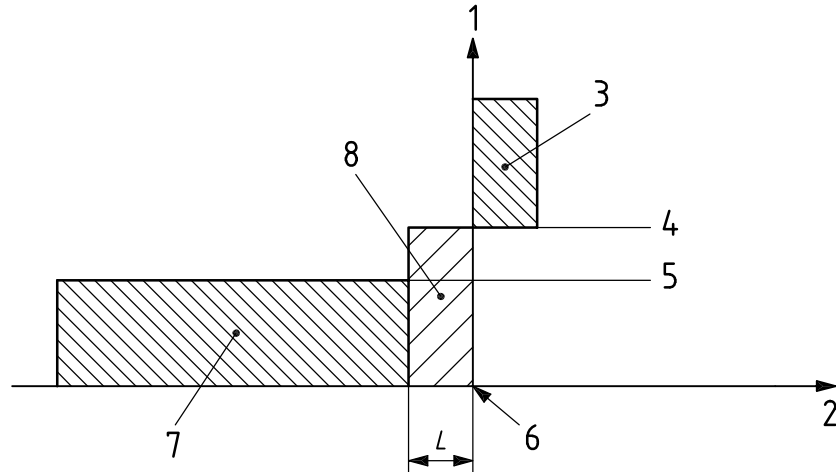
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<sup>a</sup> CRS equipped with connectors narrower than 15 mm shall provide guides to ensure the centering of connector above the magnet.

**Figure C.1 — Detection test apparatus — side and plan views**



**Key**

- 1 induction at point A
- 2 point B position
- 3 ISOFIX connector detected
- 4  $F_2 \approx 0,115 T$
- 5  $F_1 \approx 0,110 T$
- 6 ISOFIX anchorage axis
- 7 ISOFIX connector non detected
- 8 area in which the ISOFIX connector presence cannot reliably be determined

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**Figure C.2 — Induction graph**

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