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ASSESSMENT PROGRAMME

# Technical Bulletin

## **Child Restraint Systems for Installation Checks**

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# Child Restraint Systems for Installation Checks

From 2013 onwards, Euro NCAP uses a selection of popular Child Restraint Systems (CRS) to assess the vehicle's ability to safely and correctly accommodate child seats. This list contains a sample of widely available, well performing child seats that represent most common types of products available on the European market. The list will be checked annually and updated if seats are no longer available on the market. Each update will occur at the start of the year preceding the year of application.

Euro NCAP does not assess or rate the child seats individually and although the child restraint systems on the top pick list are generally recommended, there are other seats available on the market that provide equal protection.

## Definitions

### **R44 groups:**

Group 0+: Infants until 13kg (approx 12 to 18 months)

Group 0+/I: Infants / toddlers until 18kg (approx 3.5 yr)

Group I: Toddlers 9 -18kg (approx 1 – 3.5 yr)

Group II/III: Children from 15 kg onwards (approx 3 yr)

### **i-Size CRS**

45-75 cm: Birth to approx. 12 months

45-105 cm: Birth to approx. 4 years

61-105 cm: approx. 4 months to 4 years

76-105 cm: approx. 9 months to 4 years

100-135 cm: approx. 4 years to 8 years

The CRS versions of the top pick list CRS are specified at the end of this document. Each CRS will be installed using the installation mode detailed in the tables below.

### **Universal Belted CRS**

CRS	Group	Installation		Type
Maxi Cosi Cabriofix	Group 0+	Belt mounted	B _ _ _	U
Maxi Cosi Cabriofix plus Easybase 2	Group 0+	Belt mounted with base & support leg Rearward facing	B _ L _	Vehicle List
Römer King II LS	Group I	Belt mounted	B _ _ _	U/UF
Römer KidFix XP	Group II/III	Belt mounted	B _ _ _	U/UF

## ISOFIX CRS

CRS	Group	Installation		Type
BeSafe iZi Combi X4 ISOfix	Group 0+/I	ISOFIX mounted with support leg Rearward facing, SIP+ NOT used	_ I L _	ISO/R3
Römer KidFix XP	Group II/III	ISOFIX mounted Forward facing	B I _ _	Vehicle List

## i-Size CRS

CRS	Size	Installation		Type
Maxi Cosi 2way Pearl & 2wayFix	67cm-105cm ≤ 18.5kg	ISOFIX mounted with support leg Rearward facing	_ I L _	i-Size ISO/R2
	>15months- 105cm ≤ 18.5kg	ISOFIX mounted with support leg Forward facing		F2X
BeSafe iZi Kid X2 i-Size	61cm-105cm ≤ 18.0kg	ISOFIX mounted with support leg Rearward facing, SIP+ NOT used	_ I L _	i-Size ISO/R2
Britax Römer Trifix <sup>2</sup> i-size	76cm-105cm	ISOFIX with Top tether mounted	_ I _ S	i-Size F2X
BeSafe iZi Flex FIX i-size	100cm-135cm	ISOFIX mounted, without side bumpers	B I _ _	i-Size ISO/B2

Any comfort adjustments on the CRS shall be changed up to a maximum stature of 135cm. The following adjustment shall be used:

- Kidfix XP, the installation will be assessed with the height adjustment set to the 8<sup>th</sup> notch up from the bottom equating to a stature of 135cm, where the lowest position is notch 1.
- BeSafe iZi Flex FIX, the installation will be assessed with the height adjustment set up from the bottom with five complete rotations of the adjustment, equating to a stature of 135cm, where the lowest position is number 1.

Where the vehicle manufacturer recommends any CRS and boosters the settings/adjustments for each applicable child stature shall be provided to Euro NCAP.

## CRS Versions

**Maxi Cosi Cabriofix**

Specification equivalent to build No: 2251394

Approval No: 04443517

**Easybase2**

Approval No: E4 04443523

**Römer King II LS**

From Serial No: 00006177 (dated 10.03.2014)

Approval No: E11 041578

**Römer KidFix XP**

Serial No: 1085025 (dated 07.09.2015)

Approval No: E1 04301304

**BeSafe iZi Combi X4 ISOfix**

Approval No: ECE R44-04 4201

**Maxi Cosi 2way Pearl & 2wayFix**

Approval No: E4-129R-000001

**Römer Trifix<sup>2</sup> i-Size**

Approval No: 129R-010015

**BeSafe iZi Kid X2 i-Size**

Approval No: E4-129R-000002

**BeSafe iZi Flex FIX i-Size**

Approval No: E4-129R-02-000017

## CRS Manufacturer Contacts

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# Child Restraint Systems for Dynamic Testing

## Q6 Dummy

The Q6 dummy will be placed in a forwards facing CRS only, rearwards facing CRS are NOT accepted. Where the vehicle manufacturer does not recommend a FWF CRS for a six year old child, the front MPDB and Side MDB impacts will be performed with the Q6 dummy seated in a booster seat selected from the top pick list. This CRS will be the **Britax Römer Kidfix XP** installed using the ISOFIX anchorages and adult belt. Where the vehicle offers no ISOFIX anchorages, it will be installed using the adult belt only. The CRS height adjustment shall be set to the 4<sup>th</sup> notch up from the bottom, where the lowest position is notch 1.

## Q10 Dummy

Where the vehicle manufacturer does not recommend booster cushion for a ten year old child (either stand-alone or as part of a booster seat with detachable backrest), the front MPDB and Side MDB impacts will be performed with the Q10 dummy seated on a booster cushion (only) selected from the list below by the vehicle manufacturer, where no selection is made the Secretariat will choose at random.

For both child dummies, the requirements detailed in the Euro NCAP COP Assessment protocol, Section 3.1.3 relating to stature, CRS adjustment and integrated CRS must be followed.

**Britax Roemer Kidfix<sup>2</sup> R** – approval number ECE R44: 04301304

**Fischer Price Safe Voyage** – approval number ECE R44: E2 0407296

### **Graco Booster Basic**

Where the Graco booster is to be installed in Euro NCAP tests, the seat belt clip must NOT be used under any circumstance. The adjustable arm rest shall be positioned to the highest position.

**Nania/OSANN Dream** - approval number ECE R44: E2 - 0403011

**Nania/OSANN UP** - approval number ECE R44: E2 – 049027

**Nania/OSANN Junior** – approval number ECE R44: E24 – 04148

**Peg Perego Viaggio 2-3 Shuttle** – approval number ECE R44.04: E24 - 0000256

Where the vehicle manufacturer recommends the use of the high back version of either the Kidfix XP, Kidfix<sup>2</sup> or Takata Maxi for the Q10, the test will be performed with either the booster cushion only with backrest removed or a booster cushion from the list above.