<table>
<thead>
<tr>
<th>Title</th>
<th>Child Restraint Systems for Installation Checks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>4.0</td>
</tr>
<tr>
<td>Document Number</td>
<td>TB012</td>
</tr>
<tr>
<td>Author</td>
<td>James Ellway</td>
</tr>
<tr>
<td>Date</td>
<td>16&lt;sup&gt;th&lt;/sup&gt; July 2020</td>
</tr>
<tr>
<td>Related Documents</td>
<td>Euro NCAP Child Occupant Protection Protocol</td>
</tr>
<tr>
<td>Status</td>
<td>Information</td>
</tr>
<tr>
<td>Application Date</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; January 2021</td>
</tr>
</tbody>
</table>
1. Child Restraint Systems for Installation Checks

From 2013 onwards, Euro NCAP has used a selection of popular Child Restraint Systems (CRS) to assess the vehicle's ability to safely and correctly accommodate child restraints. 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 installation list are generally recommended, there are other seats available on the market that provide equal protection.

1.1 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 15kg onwards (approx 3 yr)

**i-Size (and other R129) 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. 15 months to 4 years
100-135 cm: approx. 4 years to 8 years
100-150 cm: approx. 4 years to 12 years

1.2 CRS for Installation Assessment

The versions of the CRS to be used in the installation assessment are specified in Section 1.3. Each CRS will be installed using the installation mode detailed in the tables below.

1.2.1 Belt-attached CRS

<table>
<thead>
<tr>
<th>CRS</th>
<th>Group</th>
<th>Installation</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxi Cosi Cabriofix</td>
<td>Group 0+</td>
<td>Belt mounted</td>
<td>B _ _ _</td>
</tr>
<tr>
<td>Maxi Cosi Cabriofix</td>
<td>Group 0+</td>
<td>Belt mounted with base &amp; support leg Rearward facing</td>
<td>B _ L _</td>
</tr>
<tr>
<td>Römer King II LS</td>
<td>Group I</td>
<td>Belt mounted</td>
<td>B _ _ _</td>
</tr>
<tr>
<td>Cybex Solution Z i-Fix¹</td>
<td>100cm-150cm</td>
<td>Belt mounted without linear side impact protection</td>
<td>B _ _ _</td>
</tr>
</tbody>
</table>

¹ Where a vehicle does not meet the installation requirements with the Cybex Solution Z, the installation will also be performed with the Kidfix SL. This will be applied for 2021 & 2022 only.
1.2.2 ISOFIX CRS

<table>
<thead>
<tr>
<th>CRS</th>
<th>Group</th>
<th>Installation</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BeSafe iZi Combi X4 ISOfix</td>
<td>0+/I</td>
<td>ISOFIX mounted with support leg Rearward facing, SIP+ NOT used</td>
<td>ISO/R3</td>
</tr>
<tr>
<td>Cybex Solution Z i-Fix¹</td>
<td>100cm-150cm</td>
<td>ISOFIX mounted without linear side impact protection</td>
<td>Vehicle List ISO/B3</td>
</tr>
</tbody>
</table>

1.2.3 i-Size CRS

<table>
<thead>
<tr>
<th>CRS</th>
<th>Size</th>
<th>Installation</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxi Cosi 2way Pearl &amp; 2wayFix</td>
<td>67cm-105cm ≤ 18.5kg</td>
<td>ISOFIX mounted with support leg Rearward facing</td>
<td>i-Size ISO/R2</td>
</tr>
<tr>
<td></td>
<td>&gt;15months-105cm ≤ 18.5kg</td>
<td>ISOFIX mounted with support leg Forward facing</td>
<td>F2X</td>
</tr>
<tr>
<td>BeSafe iZi Kid X2 i-Size</td>
<td>61cm-105cm ≤ 18.0kg</td>
<td>ISOFIX mounted with support leg Rearward facing, SIP+ NOT used</td>
<td>i-Size ISO/R2</td>
</tr>
<tr>
<td>Britax Römer Trifix² i-size</td>
<td>76cm-105cm</td>
<td>ISOFIX with Top tether mounted</td>
<td>i-Size F2X</td>
</tr>
<tr>
<td>BeSafe iZi Flex FIX i-size</td>
<td>100cm-135cm</td>
<td>ISOFIX mounted, without side bumpers</td>
<td>i-Size ISO/B2</td>
</tr>
</tbody>
</table>

1.2.4 CRS adjustments

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

- Cybex Solution Z i-Fix, the installation will be assessed with the height set to the 8th position up from bottom equating to a stature of 135cm, where the lowest position is #1. The linear side impact protection will not be used.
- 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.
1.3 CRS Versions

Maxi Cosi Cabriofix
Specification equivalent to build No: 2251394
Approval No: 04443517

EasyFix
Approval No: E4 04443522

Römer King II LS
From Serial No: 00006177 (dated 10.03.2014)
Approval No: E11 041578

Cybex Solution Z i-Fix
Approval No: 030036

Römer KidFix SL
Approval No: E1 04301312

BeSafe iZi Combi X4 ISOfix
Approval No: ECE R44-04 4201

Maxi Cosi 2way Pearl & 2wayFix
Approval No: E4-129R-000001

Römer Trifix³ 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
## 1.4 CRS Manufacturer Contacts

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Name</th>
<th>Title</th>
<th>Address</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Britax Römer</td>
<td>Farid Bendjellal</td>
<td>Group Director Car Seat Regulatory Affairs</td>
<td>Theodor-Heuss Str. 9, 89340 Leipheim, Germany</td>
<td>+49 8221 3670 101</td>
<td><a href="mailto:farid.bendjellal@britax.com">farid.bendjellal@britax.com</a></td>
</tr>
<tr>
<td>Dorel Europe</td>
<td>Erik Salters</td>
<td>Safety Research Department</td>
<td>Korendijk 5, 5704 RD, Helmond, the Netherlands</td>
<td>+31-(0)492845745</td>
<td><a href="mailto:erik.salters@dorel.eu">erik.salters@dorel.eu</a></td>
</tr>
<tr>
<td>HTS BeSafe</td>
<td>Okke van Mourik</td>
<td>Product Development manager</td>
<td>Nieuwegracht 13, 3512 LC Utrecht, The Netherlands</td>
<td>+31 30 2316586</td>
<td><a href="mailto:mourik@hts.no">mourik@hts.no</a></td>
</tr>
<tr>
<td>Cybex</td>
<td>Costandinos Visvikis</td>
<td>Director Industrial Relations Child Safety</td>
<td>Riedinger Str. 18, 95448 Bayreuth, Germany</td>
<td>+49 921 78511 551</td>
<td><a href="mailto:costandinos.visvikis@cybex-online.com">costandinos.visvikis@cybex-online.com</a></td>
</tr>
</tbody>
</table>
2. Child Restraint Systems for Dynamic Testing

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.

2.1 Q6 Dummy
2.1.1 The Q6 dummy will be placed in a forward facing CRS only, rearward facing CRS are NOT accepted.
2.1.2 The vehicle manufacturer may recommend a CRS for the Q6.
2.1.3 Any belt guides, such as the Kidfix 2 R lap belt (secureguard), shall only be used providing there is clear information in the vehicle handbook instructing the user to install the CRS with the guide.
2.1.4 Any additional adjustments, such as side impact extensions, shall only be used providing there is clear information in the vehicle handbook instructing the user of their use and required position.
2.1.5 Where the vehicle manufacturer does not recommend a FWF CRS for a six year old child, the front MPDB and Side AE-MDB impacts will be performed with the Q6 dummy seated in a Britax Römer Kidfix SL installed using the ISOFIX anchorages and adult belt.
2.1.6 Where the vehicle offers no ISOFIX anchorages, the Kidfix SL will be installed using the adult belt only. The CRS height adjustment shall be set to the 4th notch up from the bottom, where the lowest position is notch 1.

2.2 Q10 Dummy
2.2.1 The vehicle manufacturer may recommend a booster cushion for a ten year old child (either stand-alone or as part of a booster seat with detachable backrest).
2.2.2 Where the vehicle manufacturer recommends to the public the use of the high back version of either the Kidfix SL, Kidfix 2 R or Takata Maxi for the Q10, the tests will be performed with either the booster cushion only with backrest removed or a booster cushion from the list below.
2.2.3 Any belt guides, such as the Kidfix 2 R lap belt (secureguard), shall only be used providing there is clear information in the vehicle handbook instructing the user to install the CRS with the guide.
2.2.4 Any additional adjustments, such as side impact extensions, shall only be used providing there is clear information in the vehicle handbook instructing the user of their use and required position.
2.2.5 Where the vehicle manufacturer does not recommend booster cushion, 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.
2.2.6 Q10 Dummy CRS
If a CRS in the list below is fitted with a shoulder belt position guide or clip, it must NOT be used under any circumstance.
Britax Roemer Kidfix 2 R – approval number ECE R44: 04301304
Where the Kidfix 2 R booster cushion is to be installed in Euro NCAP tests, the lap belt guide shall only be used where the OEM recommends this CRS to the public and there is clear information in the vehicle handbook instructing the user to install the CRS with the guide.
Graco Booster Basic – approval number E11-0444165
The adjustable arm rest shall be positioned to the highest position.
Nania/OSANN UP - approval number ECE R44: E2 – 049047
Nania/OSANN Junior – approval number ECE R44: E24 – 040148
Peg Perego Viaggio 2-3 Shuttle – approval number ECE R44.04: E24 - 0000256