

**Child Restraint System (CRS)
I-SIZE Regulation**

**A step forward on further
improvement of child safety**



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Mr Roberto Marelli, ENPC President



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The European Nursery Products Confederation (ENPC) held a Conference on the new **“Child Restraint System, I-Size Regulation”**, which took place on September 19th 2013 at the Kind+Jugend trade show, Cologne.

The conference aimed to inform the economic operators on the new legislative developments in an important sector for child safety: the new car seat regulation. The conference represented the industry interests, consumers’ perspective and latest studies thanks to the participation of the European consumer voice in standardisation (ANEC) and of the Technical University of Berlin.

On 9th July 2013 the UN Regulation 129 (UN R129) **“Uniform provisions concerning the approval of enhanced Child Restraint Systems used on board of motor vehicles (ECRS)”** entered into force as an annex to the 1958 Agreement. However, despite the adoption of the I-SIZE Regulation by the United Nations Economic Commission for Europe (UNECE), the UN R129 has not been transposed in EU law as it has not been formally published on the EU Official Journal yet.

The Seatbelt Wearing Directive describes explicitly the use of Child Restraint System (CRS) in compliance with the United Nation Regulation N 44 (UN R44). With the entry into force of the R129 is starting a transition period where car seats in compliance with both R44 and R129 will be placed on the market. The Seatbelt Wearing Directive (EU directive) is not amended, but two regulations will be valid for the car seat market until the end of the transitional period (probably 2018-to be confirmed). From 2018 on only R129 will be the standard of reference.

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Why a new regulation?

Prof. Heiko Johannsen, TU Berlin, Institut für Land und Seervekehr

Prof. Johannsen explained that due to the vulnerability of neck in babies; high centre of gravity in seating position for babies and toddlers; and the vulnerability of abdomen, a new effective regulation is needed. He showed data, injury risks depending on age, and he explained the CRS use. The R44 allows forward facing CRS from 9kg in most of the European countries between 6 and 12 months, and in Scandinavian countries for children older than 3 years. He stressed that the lateral impact protection has to be taken into consideration.

Three main problems need to be considered: an early change (i.e. before 18 months old) forward facing of the CRS leads to a high neck injury risk in frontal impacts; a wrong installation of CRS reduces its protection capabilities, and the lateral impact still needs to be improved. Prof. Johannsen concluded on showing the requirements for the new regulation:

- discourage from early change from rear facing to forward facing,
- use ISOFIX as solution to avoid wrong installation of the CRS, and
- define mandatory requirements for lateral impact protection.

The new regulation and changes

Mr Farid Bedjellal, Britax Group, Member of the German association of childcare product manufacturers BDKH, ENPC member

Mr Bedjellal faced the changes of the new I-Size regulation explaining its six key pillars. The first one is the integral universal ISOFIX (rigid attachments + anti rotation device), followed by a rear facing position mandatory to 15 months, and the side impact test is considered. Moreover, the geometrical dimension of the CRS is based on the geometrical dimension of the child based on more advanced dummies. Comparing the R44 to R129, it is clear that the new I-Size regulation is also improving the security on impact thanks to a unique support leg length and the new way of the baby classification linked to the body's size (and no longer to the baby's weight). The last fundamental pillar is the improvement of the label's readability which will be simpler to understand.

Regulation 129: Enhanced Child Restraint System, Benefit for Consumers

Mr Ronald Vroman, Automotive expert, The European consumer voice in standardisation (ANEC)

Mr Vroman, representing the European consumer voice in standardisation (ANEC), presented the consumers' benefits underlying the main concerns on the R44: not side impact, forward facing is from 9 kg onward and the classification is not very universal. The improvements in the new R129 are: the rearward facing mandatory up to 15 months, introduction of side impact test procedure, reduction of the incorrect installation's risks, stature based classification, improvement of car-CRS interface, and state of the art test tools.

Mr Vroman stressed that from the consumers' point of view, the implementation of i-Size is improving the protection and the universality of the labelling. From the consumers' perspective, i-Size regulation is considered an improvement of the Regulation 44.

I-Size Impact and Consequences for the Industry

Mr Francois Renaudin, Dorel Europe, Member of the French industry federation of toys and childcare product manufacturers FJP, ENPC member

Mr Renaudin, showing the impacts and consequences for the manufactures, explained the changes that the industries need to face in the coming years (i.e. the classification which is based on the child's stature) for ensuring a better adaptation of the CRS to the Child. Under the R129, the products will be different as rules have been defined for the length of the base as well as the adjustment range of leg support. Moreover, the CSR manufacturer will be responsible for defining a maximum child mass, and the new side impact test is requiring developing new solutions. i-Size is increasing dynamic tests and neck load criteria more than the use of mummies with abdominal sensors could be the new possible requirements.

i-Size Regulation increases the child safety and five key points can be highlighted:

- improved protection at higher forces for side and front impact better protecting of the head and neck;
- rearward faced travelling mandatory up to 15 months old;
- ISOFIX has less chance of being incorrectly used than belted car seats;
- i-Size car seats will fit all ISOFIX cars;
- length classification.

Finally, the new i-Size regulation is an important opportunity to move forward on further improvement of child safety. With a new standard being introduced, a dialogue between administration, industry and consumer associations represents a fundamental key for an effective child safety implementation more than introducing a common framework of adoption on the market of new standards.

Conclusions

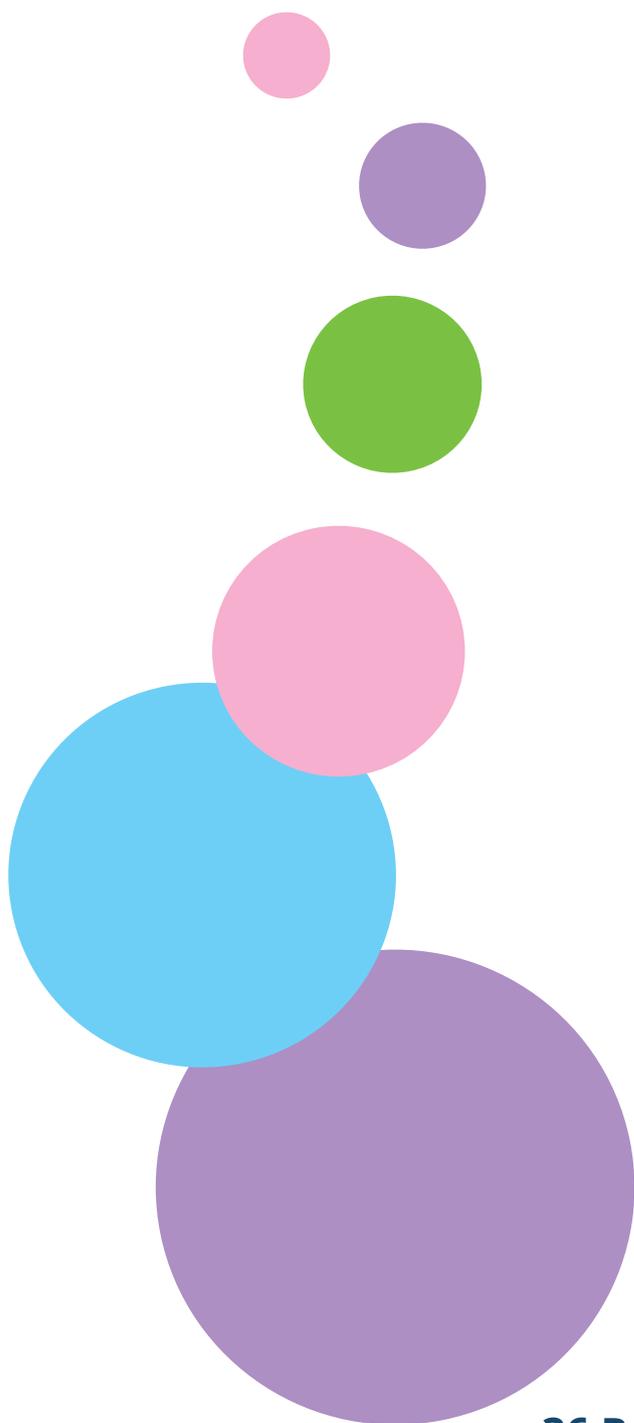
Mr Roberto Marelli, ENPC President

Mr Marelli on behalf of ENPC members welcomed the latest car seat safety regulation i-Size (or UN R 129) as it is a step forward on further improvement of child safety. It provides extra child's protection by providing rearward facing travel for children up to 15 months instead of 9 to 12 months.

I-Size entered into force on July 2013, and it does not currently replace the R44/04 legislation, but runs alongside it, and it will fit every i-Size approved cars that will be I-Size compliant. The Enhanced Child Restraint System has been developed by a committee of experts under the indication of United Nation, with the object to increase child safety in UN countries by addressing essential areas such as misuse, extended rear facing position, side impact and new test tools.

Concluding, ENPC members are happy that major improvements for the transportation of children in cars have been made, and that a higher level of protection for the head and neck of babies will be ensured thanks to:

- mandatory rear facing transport until 15 months, at least
- side impact protection due to a new test reproducing a lateral impact
- ISOFIX system
- better baby classification linked to baby's size



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