

How construction companies influenced the development of the next-generation helmet with integrated eye protection

MSA has been producing industrial helmets for more than 50 years and today is the world leader in workers' head protection. In recent years, we have received feedback from many end users and distributors about our helmets and eye wear, about other brands and the challenges faced by helmet users. This feedback enabled us to determine that integrated solutions combining head and eye protection are a real benefit to construction workers so we decided to take an in-depth look at the real needs of the workers. **MSA interviewed more than 350 end users in order to understand what next-generation head and eye protection for construction workers should offer.**

One of the end users interviewed was **COLAS**, world leader in the construction and maintenance of transport infrastructure. Colas used the 4th Safety Week Campaign to implement a new safety policy and to remind everyone that it is mandatory to wear PPE including a safety helmet. A series of posters have been produced to back a communication campaign that links the use of PPE to the idea of being a good professional, thus drawing a parallel between the people at Colas and other professions such as soldiers, or firefighters, who are all protected by MSA helmets.



MSA has supplied one regional branch of COLAS in the Lyon region with safety helmets. There are 3700 workers in this region. The Health and Safety Officer in that region, **Mr DARMEDRU**, explains why and how they influenced the development of MSA's new V-Gard 930 helmet:

“Safety at work and on the road has always been one of Colas' major concerns. We therefore put a great deal of effort into protecting the health and safety of our people. When MSA asked us if we would like to influence the development of future head and eye protection, we were delighted to get involved.

We first visited the MSA plant in Chatillon/Chalaronne (France) where we learned a great deal about the development, testing and production of various helmets from those worn by firefighters to safety helmets. MSA engineers and product managers then visited us several times to understand the detailed risks we face and our needs. The risk of falling objects or collision with fixed objects, tools or plant was very evident but combining this with the required eye protection is more challenging. Working with heavy machine tools and pressure equipment; handling concrete and cutting curbstones with chainsaws are all jobs which produce a great deal of dust and flying particles.

We are convinced that a helmet with integrated eye wear is the best solution for protecting our workers, ensuring that the eye wear is always ready to use.

The integrated helmet solutions available on the market were often not safe and/or not comfortable enough. The eye area was not well enough protected; there was often a gap at the bottom of the eye wear. The gap was even bigger for solutions with integrated over-spectacles that fit over most corrective eye wear.

We explained that road construction workers spend a great deal of time leaning forward. This means that the helmet must balance perfectly on the head and be very stable. Working mainly outdoors, the comfort of the sweatband is also very important. The final point of our initial requirements was a modern and attractive design to encourage wearing acceptance.”

MSA engineers summarised these needs and feedback from other construction companies, translating them into real product requirements. The most important were:

- The requirement for gap-free, close-fitting eye protection which is comfortable
- All types of corrective spectacles to fit underneath this
- Perfect balance and comfort for the helmet and especially the sweatband

The Health and Safety Officer Mr DARMEDRU recalls when he saw the first prototype of the new helmet:

“Approximately 1 year later, the MSA product manager showed us the result of our feedback. I tried on the prototypes along with some colleagues. MSA really incorporated our requirements. Our greatest concern about the protection performance of integrated eye wear was solved with an intelligent system: 2-D adjustment of the eye wear to bring it really close to the face and a rubber seal on the lens bottom to ensure gap-free protection.



The suspension with a low-sitting nape strap and flexible pad at the nape ensures good stability on the head. Although the helmet shell is big, it is well balanced so we did not notice the weight. The extra-large, sweat-absorbing sweatband was also very comfortable. We gave some feedback on details which needed to be improved, but overall we were already very impressed.”

MSA engineers summarised the feedback from the alpha test and incorporated the needed product changes. One year later MSA again visited Health and Safety Officer **Mr DARMEDRU**:

“In spring 2016 we received the certified beta test helmet which incorporated our comments. Five workers used it for 2 weeks and gave minor improvement requests to MSA. The integrated over-spectacles offer a truly natural field of vision whether worn with or without corrective spectacles underneath and were very easy to stow inside the shell. But when the workers made sudden, exaggerated moves the over-spectacles fell down. MSA was able to incorporate a locking position to ensure that the over-spectacles stay in desired position. As all workers who tested the new helmet were very positive about it, we decided to buy the helmet when it was launched in July 2016! MSA also sent us some instructional videos on how to put on and maintain our helmets, videos that we will use as a tool during our daily safety message.

In a nutshell, we were really convinced by the unique rubber seal and the 2-D adjustment of the over-spectacles combined with the comfortable and high-stability helmet and we are delighted to have played a part in improving the safety of road construction workers.”



MSA thanks Mr DARMEDRU for his close cooperation and this report!

If you would like to learn more about the new V-Gard 930 helmet system, please watch the videos at: www.msasafety.com/vgard900