



Creative RFID technology for personal protective equipment (PPE)

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Ropes, chains, slings and round slings, referred to as “sling gear” in technical jargon, have numerous different applications. They are used in the industrial sector, for example, for lifting and load safety and for load handling. However, personal protective equipment can also be found in the events and sports sectors. The sling gear must be of flawless quality and function, continuously checked and maintained, because safety must come first when human lives are at stake.

Regulations standardised by the trade association are available for testing sling gear. A visual inspection must be carried out each time before a sling is used. At least once a year, an expert carries out and documents an additional inspection. The administrative effort is enormous, takes up a lot of time and results in costs. This is where smart-TEC's RFID technology comes into play and offers solutions for inventory, safety and material testing.

Edelrid, a company based in the Allgäu region of Germany, manufactures, among other things, innovative PPE (personal protective equipment) products that are used in the industrial sector, in adventure parks and climbing forests or in mountain sports. These products are taken to a new level and equipped with RFID technology from smart-TEC.

Edelrid safety helmets are equipped with the smart-DOME Classic product. The chip has been embedded in high-quality, soft PU and is thus protected against mechanical impacts, temperatures and weather influences. In addition, this RFID transponder impresses with its attractive design. For the ropes, Edelrid has long relied on self-adhesive labels from RATHGEBER, the parent company of smart-TEC, which are wrapped around the end of the rope. These have now been further enhanced with RFID technology from smart-TEC.



Furthermore, two RFID transponders from the smart-DOME Freestyle and smart-DOME Cable Ties product range are used because these products not only offer high resistance but also allow for various mounting options. The RFID transponders can be sewn directly into textile straps or can be attached subsequently using cable ties. This is a practical touch if existing products have to be retrofitted with RFID technology. For example, mountain rescue services can retrofit their existing climbing harnesses with the cable tie solution. The wide range of products from smart-TEC makes it possible to respond to every requirement in a targeted manner.

When you hold up the UHF reader to any version of the RFID transponders, the globally unique ID of the integrated chip (TID) is read. This makes every piece of equipment unique, and the results of the annually prescribed safety inspection can be individually recorded. On the one hand, the legal regulations are complied with and at the same time safety is increased. The sources of errors are also minimized because the serial number is transmitted digitally and is no longer recorded manually. The time saved as a result is also an advantage that should not be underestimated. In order to offer customers this service, Edelrid provides a special app and will convert more products to smart-TEC's RFID technology during the year.





About smart-TEC:

smart-TEC GmbH & Co. KG is a company of the RATHGEBER Group in Oberhaching. For 20 years we have been developing and manufactured customer-specific RFID and NFC transponders. The spectrum ranges from self-adhesive, printed RFID and NFC labels to towards robust, durable, weather and temperature resistant transponders for the industrial sector. The majority of RFID transponders are certified for use in explosion-proof areas. In cooperation with system partners, **smart-TEC** also offers comprehensive project support.

Core competencies:

- Robuste, langlebige, industrietaugliche, witterungs- und temperaturbeständige RFID- und NFC-Transponder- auch für den Ex-geschützten Bereich
- Customized RFID and NFC labels, printed or blank, with various chip technologies, frequency ranges and forgery-proof or tamper-proof features
- Comprehensive NFC know-how in the Competence Center
- Competent project consulting and support

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