

Battery powered rescue tools

“This is much heavier than our previous equipment”, “And what do I do if I forget to charge the batteries?” “Can I work submerged with it?”, “The casing is plastic, is it stable enough?”

Well, the early years weren't easy for a person selling battery-operated rescue tools.



Daniel Engelhardt

When exactly 10 years ago the first complete set of cutter, spreader and ram came out, it was nothing less than a revolution. For more than 40 years, customers trusted the proven system of pump, couplings, hose and rescue tool. And with good reason. There have been and still are fantastic new developments in this field that have made and will make rescuing people from vehicles more efficient.

Nevertheless, it was time to dare something new. And from another point of view it was only logical, looking at the worldwide leaps in development in this area. The advancements in battery technology, which received a real boost with the introduction of the lithium-ion battery, were enormous. This groundbreaking innovation made it possible for many manufacturers from the most diverse branches of industry to come onto the market with new developments driven by rechargeable batteries.

▼ **LUKAS Spreader SP 300 E (2010-2014)**
of the first eDraulic generation in use.



Daniel Engelhardt is Product Manager at LUKAS.

The newly developed lithium-ion battery was also the decisive factor for us when the eDraulic was introduced in 2010. Negative aspects such as the memory effect or high self-discharge no longer existed with this technology, which made working with battery-powered devices much more reliable and comfortable.

The introduction of the eDraulic meant that it was possible to achieve the same power and forces as their counterparts with using a conventional drive. In combination with the advantages such as greater mobility, lower service costs, less noise and safer handling on site due to the absence of hoses, we were able to offer a highly competitive total package compared to conventional sets. Nevertheless, the step from conventionally powered rescue equipment to battery technology was a big one, and the decision-makers who decided to take this step at the time certainly had not uncommon to do a lot of internal persuasion. We are still very grateful to these customers, some of whom have been with us for ten years now and who are following this path with us, for their

courage and assertiveness in treading new paths.

The success we had with our new technology did not remain hidden from our competitors and only a few years later it was possible to get a complete portfolio of battery-powered rescue systems from all well-known manufacturers.

The devices became shorter, lighter and more powerful with each new generation that came on the market. The portfolio was expanded to include telescopic rams, a development that demanded a lot from the various research and development departments due to the high oil requirement.

Battery technology has also developed further. While 2.6Ah batteries were the benchmark at the beginning, the 9Ah battery has become the measure of all things in the meantime, which has consequently led to an extreme extension of working hours.

Many other important innovations were brought to market as a result. Devices can now be converted at will from hose-connected technology to battery technology with little effort, batteries can be read out and diagnosed on the computer for their performance. For a long time, protection class IP54 was considered the maximum. In the meantime, there are devices on the market that have protection class IP58, batteries even with IP68, which allow the devices to be operated under water for up to 60 minutes. Even a battery change under water is possible. An impressive development that seemed unthinkable a few years ago.

All in all, it can be said that hardly a year passes in which none of the manufacturers brings anything new in terms of battery technology to the market. Whereas in earlier times all manufacturers were able to come up with news every five years, just in time for Interschutz, standstill means a step backwards in an industry in which international competition has increased significantly in recent years.

This is a fact that above all accommodates our customers. In the past, the question was whether to use a hose or a rechargeable battery. Nowadays, the question is which manufacturer offers the decisive advantages in battery technology for the customer.

Back in the days, it took a lot of courage to take risks to take a step into the unknown so consistently. Both on the



part of the manufacturer and the customer. Finally, you can see that all the effort and courageous action has paid off. In recent years, it has been observed that the market has turned completely in the direction of battery technology. In many large markets such as Japan, Great Britain or the USA, the proportion of devices with battery technology is significantly higher than that of conventional devices. Many large fire brigades around the world have already completely switched over to battery-powered equipment. With both large and small procurements worldwide, the question of whether to use hoses or rechargeable batteries hardly ever arises.

The coming years will be exciting, all manufacturers will work on making the devices even faster, lighter and stronger. The rechargeable battery as a permanently available energy source in the device offers exciting development possibilities, which will enable the battery-powered devices to offer many more useful features in the future. This is an interesting path, where it is not yet possible to estimate where it will be heading. All manufacturers are working at full speed on new ideas and it will be very exciting to see which new releases will be on the market in the coming years.

The area of responsibility for our sales

▲ **Latest generation of watertight LUKAS Spreader: SP 333 eWXT (2020).**

team has also shifted slightly. Whereas in the early years, when we were the only manufacturer of battery technology, the focus was on convincing customers of our idea of unlimited mobility, the focus now is more on highlighting the advantages of our devices over the competition. Customer questions have also become much more specific over the years. With the increasing spread of rechargeable batteries in all branches of industry and in the private sector, customers' knowledge in this respect has also increased considerably. Whereas we used to have to be experts in rescue techniques and hydraulics, battery characteristics and electrical engineering are two areas in which we first had to familiarise ourselves. A development step for us, which we have accepted gladly.

Fortunately, we are no longer asked what happens if one forgets to charge the battery!

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