

Customized EVSE sockets allowed Zaptec to engineer EV charging stations that are simple to use, easy to install and highly innovative.



The Global Potential

Electric vehicles have the potential to change the world, but to truly live up to their potential, they need cutting-edge charging solutions to support them. An EV charger should be powerful and efficient – and it needs to work without clutter, complication or failure.

Zaptec's Vision

What if there was a charger that was sleek, compact and designed to charge cars faster, prevent electrical damage and even talk to you? This is the vision of innovative Norwegian start-up Zaptec, and with the help of ITT Cannon, it is becoming reality.

The Power of Collaboration

To realize its vision for a revolutionary EV charge, Zaptec approached ITT Cannon and after a few short months of collaboration, ITT Cannon delivered the custom socket Zaptec needed, and a new generation charging station – the ZapCharger SMART – was born.

Zaptec needed an electrical socket that would seamlessly integrate into a unique new form, as well as a new sealing concept to protect electrical components from the elements, despite its unorthodox shape. With its reputation for close collaboration, responsiveness and customization of solutions to customer needs, ITT was the right partner for the job.

Customer Problem

Zaptec wanted to engineer a charger that, for the first time, moved all the complex electrical infrastructure – including safety functions, fuses, energy measurement and computing components – inside the charging box. This way all a customer would need is the box itself and a cable to charge up their car.

But that wasn't all. Zaptec wanted this charger to be smaller, to improve on existing industry standards, and to look great at the same time. A key challenge was finding a socket small enough to work with the design requirements. Zaptec turned to ITT Cannon to solve three problems – engineering a new socket, creating a new sealing concept and offering an increased power specification range for the charging station.

How We Solved It

One of the most vital elements of the ZapCharger SMART was its simple, sleek design that broke from the industry mold. This would have been impossible without a new socket.

The process was challenging, but ITT's focus on problem solving combined with engineering expertise and the flexibility to alter the design based on Zaptec's evolving needs helped make the project a success.

The ITT Cannon team performed rapid prototyping, developing new tools and qualifications and providing consistent technical support through each step of the process. The team's responsive, intuitive engineering resulted in a new generation of socket – one featuring a protruded port area and a zigzag base – enabling a perfect "angled" fit into the new casing. Like a glove.

Immediate Impact

The ZapCharger SMART is available in the Norwegian market but there are plans to expand to the wider European, North American and global markets afterward.

This charger is not like the others. First, its interface has a universal standard. Second, it has a modern, light look. Third, it's powerful. The charger has raised specifications from the industry standard of 2.3 kW to 22kW and from 230/10A to 400V/32A. It's also smart. The station contains technology that allows it to sense and prevent conflicts with the power grid, overcharging and circuit damage. It's simple to use, easy to install and hassle-free to maintain.



"The ITT Cannon team went above and beyond for us," said Zaptec Program Manager Jonas Helmikstol. "Their focus on quality and precision in the face of challenges and changes during the evolving creative design process was invaluable. They were detail-oriented, had a foolproof documentation process to track changes, and were always, always solution-focused when presented with hard problems. Simply put, we could not have come up with this solution without ITT."

"They took pride in their work and truly cared about the customer – we really had an amazing journey."

A Shared Culture

Core electrical component expertise and the ability to custom engineer connector solutions is a prime reason Zaptec trusted ITT to solve its unique challenge. But a shared company culture also provided a connection. The two companies share several key values that made the collaboration successful – fair treatment of employees, pride in quality work and an overarching emphasis on the customer experience. This culture helped bring an idea to life.