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SUCCESS STORY

ISOLECTRA:

PLUG & PLAY ELECTRICAL INSTALLATION IN PREFABRICATED CONCRETE CONSTRUCTION

The Dutch company Isolectra BV, based in Rotterdam, specializes in pluggable electrical installations in buildings and public spaces. When it comes to modular construction, Isolectra enables the installation to be poured directly into precast concrete parts, using Wieland PREFAB® solutions. Casper Bontenbal, Marketing Manager at Isolectra, provides an insight into the process and explains the benefits of the system.

What requirements and challenges are associated with electrical installation in precast concrete construction?

It goes without saying that the installation must be resistant to the chemicals in the concrete and able to withstand the conditions during casting and hardening of the concrete. In addition, it should meet all requirements and be tested and certified accordingly. Finally, it must be easy to connect the electrical installations in the poured concrete parts. This sounds logical and simple, but it is difficult to achieve.

Why did you choose Wieland Electric as your partner and what are the advantages of using Wieland RST® and PREFAB solutions?

How could we have chosen anything other than the products of our trusted partner Wieland Electric, the inventor of the pluggable installation? Apart from this, Wieland



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offers the waterproof RST® installation system, which has been tried and tested in harsh environments for many years. When we were looking for a way to cast the electrical installation directly into precast concrete elements, the first choice was easy: RST® already meets a variety of requirements needed for such installations, including IP69 protection, waterproofing, chemical resistance, mechanical robustness, a long life expectancy and the right electrical specifications. The connector system did not have to be changed. All we needed to do was to make the right cable, perform the endurance tests, and start the certification process.

In which projects have you used Wieland solutions so far?

We have already supplied prefabricated concrete installations for many house projects. Starting with five pilot projects in 2020, we have now implemented installations for hundreds of houses. These installations were cast into prefabricated floors and prefabricated walls, making these floors and walls "pluggable" on site. Many of these houses were produced and built in the Netherlands, but some houses were even exported to the Caribbean as kits and assembled abroad.

Can you tell us about the feedback you have received from customers?

Our customers are thrilled. The benefits, especially the rationalization and acceleration of the construction process, are obvious. The elements of the building are delivered pre-assembled. On the building site, they are then simply plugged together and the system is ready to be connected to the control cabinet – also via plug & play. This not only reduces time and costs, it also requires fewer people and less traffic on the building site. This makes planning easier and cuts down carbon and nitrogen emissions. However, it is very important to thoroughly instruct all persons involved in the process about the concept of pluggable installation and the handling of the products.



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In your opinion, how will the market for plug & play installation in precast concrete construction develop over the next five to ten years?

Due to the high demand for more and affordable houses in the Netherlands, at a time when skilled workers are in short supply, combined with the need to reduce carbon and nitrogen on building sites, we expect to see a very strong increase in modular buildings, especially prefabricated houses. The majority of these will be prefabricated concrete houses or hybrid houses with prefabricated concrete floors and wooden walls. There are numerous innovative initiatives and several companies building factories to produce prefabricated houses. We are certain that the prefabricated house market will continue to grow in the coming years.



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IMAGE MATERIAL



Casper Bontenbal, Marketing Manager at Isolectra. (Image: Isolectra BV)



The RST® system from Wieland Electric enables installations to be cast into prefabricated floors and walls, making them "pluggable" on the construction site. (Image: Isolectra BV)



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ABOUT WIELAND ELECTRIC

Wieland Electric, founded in Bamberg in 1910, is the inventor of safe electrical connection technology. Today, the family-owned company is one of the leading suppliers of safety and automation technology and has been the global market leader in the field of pluggable electrical installations for building technology for over 30 years.

Wieland Electric assists customers with on-site support all over the world as a capable service partner and solution provider. This is possible thanks to around 1,700 employees and subsidiaries as well as sales organizations in over 70 countries. In addition to Wieland Electric GmbH, STOCKO Contact GmbH & Co. KG has belonged to Wieland Holding since 1998.

The company's core industries include mechanical engineering, wind power, intralogistics and HVAC, as well as building and lighting technology. The broad portfolio includes components, products, and solutions for electrical installation, connection technology, power distribution, safety technology, and the control cabinet. In addition, Wieland Electric offers an extensive service and training program. With cross-industry experience, a great product diversity and numerous service offerings, the company has consistently developed from a component supplier to a solution provider in recent years.