

FinnProfiles

FinnProfiles' Seals Are Essential to Škoda Group's ForCity Smart Artic Trams' Travel Comfort and Safety



Škoda Group's railroad car factory in Otanmäki, Finland, is an undeniable pride of the Finnish industry.

All the stunning trams that make the lives of thousands of Finns easier and happier are manufactured there.

For example, all Tampere and newer Helsinki trams started their journey in Otanmäki.

That is why many of us must be thinking: how on earth can this big rail industry factory be located this deep in Finland's wilderness?

History

Škoda Group's Finnish business unit is officially named Škoda Transtech Oy, which originates from Otanmäki, an urban area in Kajaani, northern Finland. Otanmäki was born in the 1950s around an iron ore mine, which was in operation in the area until the mid-1980s.

The mine was originally owned by the state-owned company Otanmäki Oy, from which it was transferred in the 1960s to another state-owned company, Rautaruukki. The story of the railroad car factory practically begins where the life cycle of the mine ended.

Therefore, the first steps of the current Škoda Transtech took place in 1985, when Rautaruukki founded a railcar factory in Otanmäki called Transtech Oy to fix the employment situation in the area after the mining activity had subsided.

The business idea was nearly flawless for that time because the backlog was supposed to match the endless Soviet Union railway equipment needs. However, the stars aligned in a position where the entire trade partner country collapsed, and the Finns had to make a new plan.

The difficulties began to ease gradually in the late 1990s when VR (the state railway company) started renewing its equipment and ordering stock from Otanmäki.

Finally, after a few ownership changes, the factory found its current owner Škoda Group in 2015, and the name was also changed to Škoda Transtech Oy after the parent company.

“The most important criteria for seals are quality, safety and delivery reliability. We feel that we can rely on FinnProfiles that our seals are of top quality and delivered on time.”

Pasi Häkkinen, Purchasing Engineer at Škoda Group

Rails to the Top

However, after the low point, the operation has managed to be steered on to the rails that have led the company to the top of the rail industry. Škoda

Transtech Oy currently forms the Group’s Region North unit, whose particular expertise includes the manufacture of arctic trams and other rail equipment.

“Almost 12,000 trains and trams have been manufactured in this factory in the last 25 years,” Pasi Häkkinen, Purchasing Engineer of Škoda Group, points out while introducing the more than 5.4 hectare production facility.

As we walk towards the production line for the finishing phase of the trams, we can see the whole spectrum of the rail industry’s production. On each side, the chassis of the trams are either welded, their bodies are assembled, or the interiors are furnished. The factory employs a total of 650 people. Rumor has it that the best welders in Finland are among them.

During our tour, the Raide Jokeri project’s trams are in production for the city of Helsinki. Initially, 29 trams were ordered, but 23 option trams have already been added to the backlog. After this, and partly already at the same time, work will continue on the trams of the second phase of Tampere. VR has also left its order at the end of the line.

“These are all very appropriate projects for us because our tram model, the Forcity Smart Artic, is designed to suit Nordic urban conditions. For example, all the trams we make for Helsinki and Tampere are from the Forcity Smart Artic product family,” says Häkkinen.

In practice, the Forcity Smart Artic means that the trams are low-floor models and will not startle, even if a huge load of snow suddenly falls from the sky. Even before the Raide Jokeri project, Škoda Group delivered 70 Forcity Smart Artic trams to Helsinki in its renewing fleet.

So far, FinnProfiles has produced 320 door seals for Tampere trains. In addition, all threshold rubbers are made by FinnProfiles. EN4554-2 approved EPDM rubber is used as the material





Škoda Group's Purchasing Engineer Pasi Häkkinen introduces the seals between the outer wall panels, which FinnProfiles manufacture

“Whether it’s the material choice or the technical structure implementation, we can count on them to support our design team in matters related to seals.”

Pasi Häkkinen, Purchasing Engineer at Škoda Group

“If the seals don’t hold or if they break down easily, it quickly affects travel comfort, for example, in the form of draft and noise carried from the outside. Also, the general appearance of the tram suffers if seals are in sloppy condition,” Häkkinen points out.

Safety has been taken into account in the selection of materials. All seals supplied by FinnProfiles are made from materials that comply with the fire, smoke and gas standard of the railway industry (EN 45545-2).

“We also appreciate that FinnProfiles can act as a consulting partner in our direction in issues related to seals. Whether it’s the material choice or the technical structure implementation, we can count on them to support our design team in matters related to seals,” Häkkinen concludes.

Read more about our solutions for railway industry.

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FINNPROFILES

Seals Complete the Travel Experience and Safety

As you can imagine, passenger comfort and safety are Škoda Group’s top priorities. Both of them are often finished with high-quality seals.

FinnProfiles’ sealing solutions can be found in the Tampere and Helsinki trams. For example, all the window seals are the work of FinnProfiles. In addition, the cockpit’s windshield and window seals, outer wall panel seals and bow rubbers are supplied by FinnProfiles.

“The most important criteria for seals are quality, safety, and delivery reliability. We feel that we can rely on FinnProfiles that our seals are of top quality and delivered on time,” Häkkinen says and continues in almost the same breath:

“In addition, it must be stated that I also remember cases where we have needed seals as an urgent delivery, and FinnProfiles has always acted in a truly exemplary manner.”

On the other hand, the importance of quality is emphasised because the seals are exposed to extreme weather conditions, wear and, unfortunately, sometimes also to pure vandalism.