



The decades of *Hakkapeliitta*

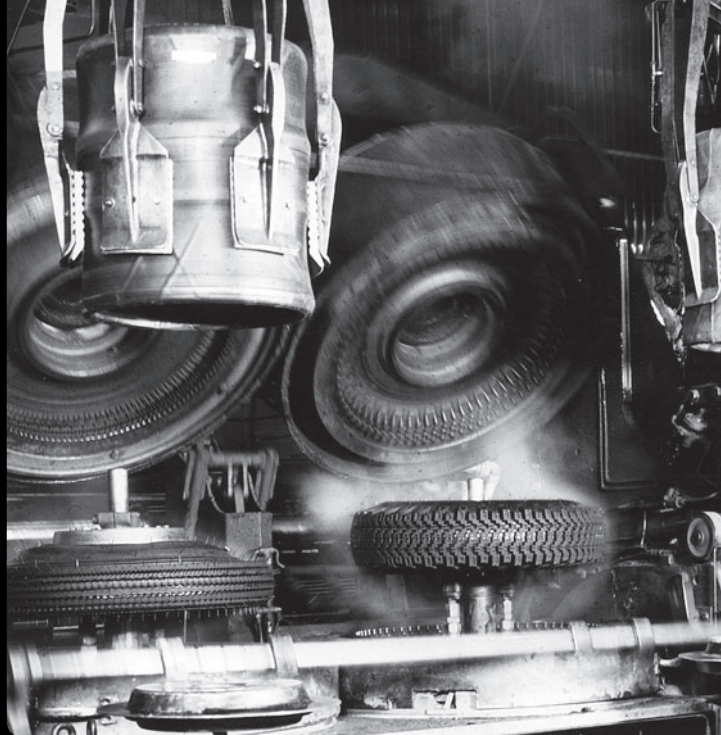
White winter roads

The world's first winter tyre, the Kelirengas made by Suomen Gummitehdas, was introduced in 1934. In that day and age, winter driving meant snowy, often unploughed roads and speeds hardly exceeding 50 km/h. The first Kelirengas tyres were designed for trucks to replace the complicated, expensive tyre chains. Kelirengas was the predecessor of Hakkapeliitta tyres.

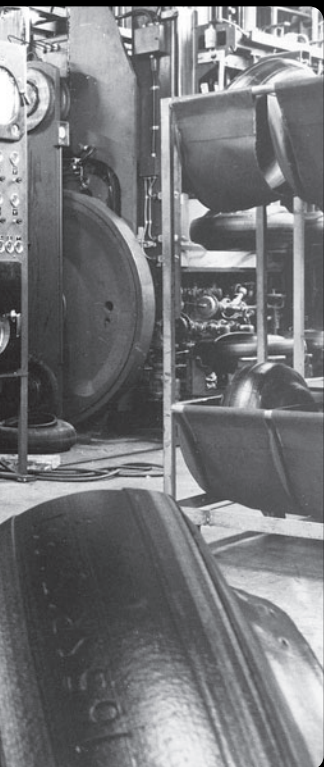
Gummitehdas Osakeyhtiö had taken an interest in manufacturing car tyres in the beginning of the 20th century. The first mention of tyres in their documentation is dated 1912, when engineer **Ragnar Gustafsson** went on a field trip to the United States. In the 1920s, the company made calculations concerning the manufacture of tyres and ordered test moulds from Berlin, Germany. The decision to initiate tyre production was made in 1931 and, after machine acquisitions and the necessary learning period, the first tyres were launched in April 1933. By the following year, the tyre department were working in three shifts and the tyre selection comprised of ten models.



The laboratory of Suomen Gummitehdas was established in 1920. This is a picture of lab workers at the Nokia plant in the 1950s.



The automatic Bag-O-Matic curing presses were introduced in the early 1960s. The self-inflating curing pad replaced the manually inserted pad.



Green tyres at the new tyre plant in 1969. Auto-form presses in the background.

Fresh tyres are transported from curing moulds to the conveyor. The new tyre plant in the early 1970s. Photo: Pauli Lehtioksa.



After the economic depression, the demand for tyres grew at the same pace as the general increase in traffic, and Gummitehdas kept expanding its tyre production. In October 1936, three moulds were ordered especially for snow tyres. They were used to make the new Snow Hakkapeliitta tyres, which then became well-known as the Hakkapeliitta, champions of snowy roads.

The challenging time of war

The Finno-Russo Wars (the Winter War and Continuation War) entailed challenging times for Suomen Gummitehdas. The company focused on serving the Finnish Defence Forces, mainly by making truck tyres and special products such as airplane tyres.

The import connections were broken, which inevitably led to a shortage of raw material. Products were made of scrap rubber and

German-made synthetic rubber, buna. The supply of chemicals was also insufficient, and the compounds had to be modified; new tyre formulas were deployed without any prior driving experience.

However, even in the turmoil of the war, Gummitehdas had strong faith in the future. Its new tyre plant was inaugurated in 1945, and after the war, it was able to respond to the huge demand for tyres.

Get there by car

Car penetration started to gain momentum in Finland in the 1950s. In 1952 – the year of the Helsinki Summer Olympic Games – the number of registered passenger cars exceeded that of trucks and busses for the first time. The deregulation of tyre import changed the competition – and kept the advertising department busy! In 1959, the rubber company changed its name to a more contemporary format,

Suomen Kumitehdas Oy.

More than one-half of Finnish roads were covered by ploughing services. The Haka-Hakkapeliitta was launched in 1956. This tyre had twice as much load-bearing tread surface than its predecessor and was a champion on roads with hard icy surfaces.

Rayon fibre, i.e. pulp-based viscose, replaced the traditional cotton chord in tyre carcasses. The sturdy and durable rayon was manufactured by the Finnish company Cord-Tuotanto, which was later merged with Suomen Kumitehdas.

The Hakkapeliitta led Finnish tyres to the international markets. The export of technical rubber products and tyres had started in the 1920s, but the war interrupted the development. Export was posted as a separate item in the annual report for the first time in 1959. In the same year, the subsidiary Finska Gummi Ab was established in Sweden, and it sold 8,500 tyres in its first year of operation.

The triumphant studded tyre

The 1960s marked an entry into an era of motorways and asphalt pavement for Finnish road traffic. The number of cars tripled, and tyres became the main product of Suomen Kumitehdas. There was active discussion on the safety of traffic in the winter; some supported the use of studs and some opposed it due to the increased wearing of roads. Various kinds of rivets, springs and spikes were used to prevent slipping.

The Kometa-Hakkapeliitta was introduced in 1963. This was the familiar Haka-Hakkapeliitta tyre with hard metal-tipped studs made by Kovametalli Oy. The Hakkapeliitta launched in 1964 was the first tyre designed particularly for studding. Suomen Kumitehdas ran an active campaign to support the use and correct mounting of studded tyres.

In the 1960s, tyres were exported from Nokia to approximately twenty countries, including the Nordic countries, England, Switzerland and the USA. Even Soviet official cars drove the streets of Leningrad with studded Hakkapeliitta tyres.

The international breakthrough of Hakkapeliitta tyres was also supported by motorsports. The Finnish winter tyres were highly valued on the mountain legs of the famous Monte Carlo Rally, where the success of **Pauli Toivonen**, **Rauno Aaltonen** and **Timo Mäkinen** gave rise to the concept of "the Flying Finns".

Radial tyres for export

Until the 1960s, winter tyres had a bias-ply structure that consisted of diagonal layers. However, new cars with better performance and driving properties were more compatible with the radial structure that quickly gained popularity in the early 1970s.

In 1967, Kumitehdas merged with wood processing and the Kaapelitehdas cable production to form Oy Nokia Ab, and inaugurated a new tyre plant soon after the merger. The first radial winter tyre was the Hakkapeliitta Radial 06 launched in the autumn of 1970. The next step was a steel-ply radial tyre. The introduction of steel-ply tyres particularly boosted the export of heavy tyres to such customers as Valmet Brazil. The first steel-ply radial tyre for passenger cars, the Hakkapeliitta 08, came to the market in 1977.

In December 1971, the plant celebrated a Million Week, as the annual production volume of vehicle tyres exceeded one million. However, soon after this the oil crisis increased the price of rubber and weakened the demand for tyres. Drivers started to think about the costs of driving. Nokian tyres wanted to also win consumers over in terms of economical driving. A 1976 advertisement in Finland urged, "Drive in Finland on Hakkapeliitta tyres. Only 2 pennies per kilometre!"

Test success

De-icing roads with salt became standard procedure in the 1980s, bringing an end to snowy driving. In these conditions, the winter tyres had to demonstrate wear resistance and wet grip. Drivers also valued low fuel consumption and silent driving. The development of the new-generation Hakkapeliitta began in 1978, and the NR 09 was introduced two years later. The new tyre featured a surprise: the traditional suction pad pattern had been replaced by a streamlined arrow shaped tread.

The new product achieved long-term success; the five millionth 09 was made in 1987. The Hakkapeliitta won four back-to-back winter tyre tests by the leading Finnish car and technology magazine *Tekniikan Maailma*. The magazine went on to say that NR 09 was "the best winter tyre we have ever tested."

Over the years, tyre testing developed continuously. At first, durability tests were driven with busses and taxis. In the 1960s, testing efforts were concentrated to Nokian in-house test drivers. The establishment of the Nokian Tyres' test centre in Ivalo, Lapland, in 1986 gave a whole new framework for the Hakkapeliitta product development

Got grip

The Nordic tyre manufacturer wanted to focus on demanding conditions and special products. Studless winter tyres were gaining ground, and Nokian responded to this challenge in 1991. An all-new family of winter tyres rolled out in 1996: Hakkapeliitta 1 continued the traditional range with a new number and environmentally friendly studding, whereas the NRW 1 offered a studless alternative.

Returning to its roots, Nokian Tyres started operating as an independent stock exchange-listed company with a strong focus on winter tyres and forestry tyres in 1995. The Vianor tyre chain was launched at the turn of the century. In 2005, the Hakkapeliitta family entered the Russian market, while the research and development team were already working on the idea of a smart tyre and possible replacements to natural rubber. The Hakkapeliitta still has a good grip on the title of the champion of the roads.

Text: Anna Lyyra-Seppänen

Photos: Vapriikki archives

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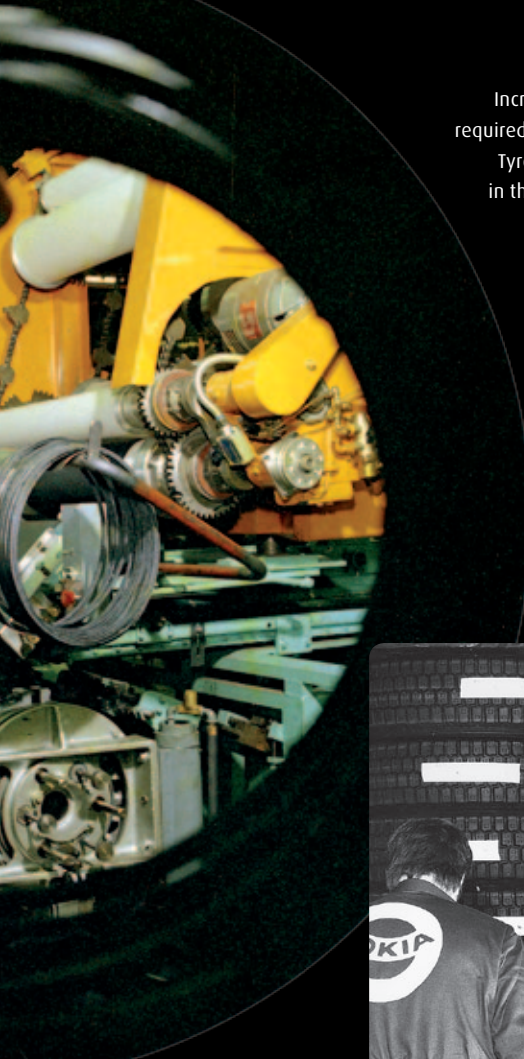
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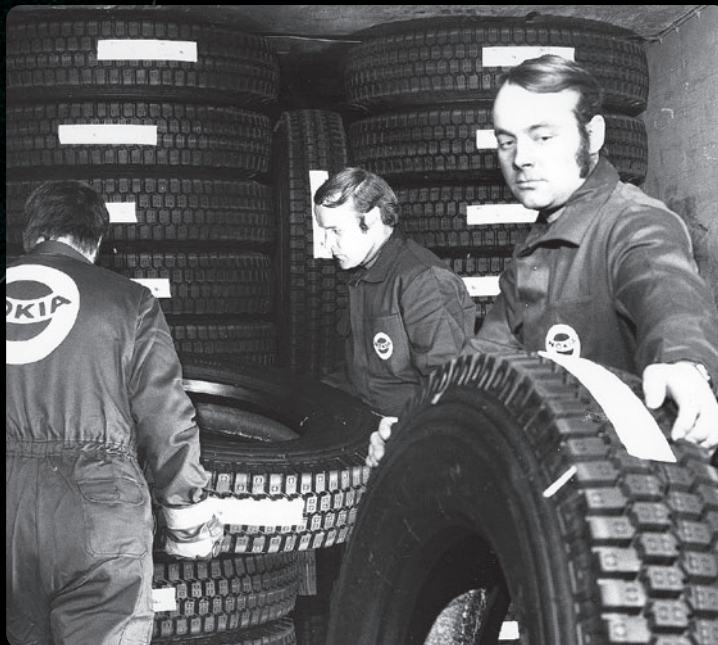
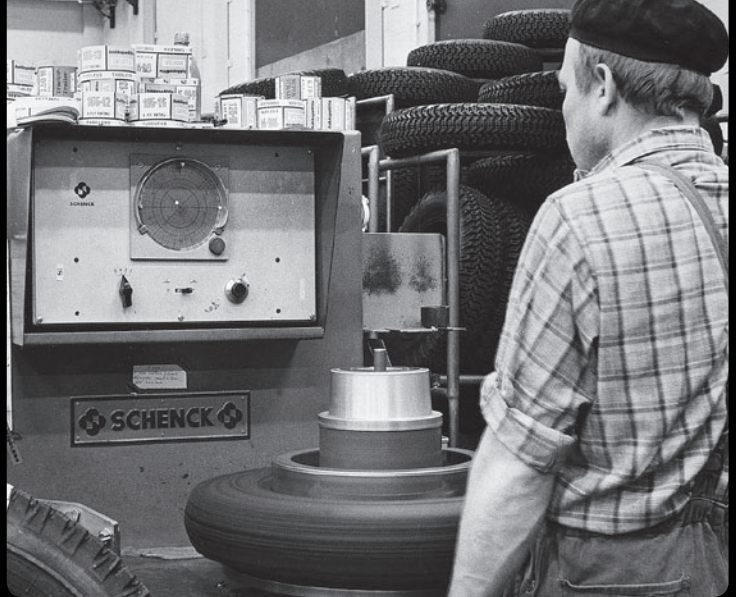
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Tyre assembler in the late 1970s. Photo: Ensio Kauppila.



Increased driving speeds required well-balanced tyres. Tyre measurement taker in the 1960s. Photo: Pauli Lehtioksa.



Hakkapeliitta tyres were the spearhead products of the increasing exports in the 1960s.

Hakkapeliitta truck tyres being loaded for transportation in 1967.



What is a Hakkapeliitta?

Breitenfeld 1631, Lech 1632, Lutzën 1632... In the famous central European battles of the thirty years' war, the spearhead of the Swedish army consisted of Finnish light cavalrymen, the Hakkapeliitta. This name is based on the Finnish war cry hakkaa päälle, commonly translated as "Cut them down!"

The Hakkapeliitta rode Finnhorses and were armed with two pistols and a sword. They typically wore a helmet, leather armour and a breastplate of steel. They fought with brave tactics based on immediate contact; the terrifying Hakkapeliitta charge often decided the outcome of the battle very quickly. They were considered a model of the modern cavalry.

Torsten Stålhandske, who was born in Finland, became a Hakkapeliitta commander and the lieutenant general of the entire Swedish cavalry. At the

beginning of Stålhandske's career, his troops also included several dozen cavalrymen from Pirkkala, to which Nokia also originally belonged.

Three hundred years later, the victorious Hakkapeliitta are now carrying the modern era's quick cavalry – cars.

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