

Sisu's KB 112 was the first European tilt cabbed truck in regular production in 1962



Typical of Sisu's production in the late 1960s was this impressive Rolls Royce-powered K 142



The M 162 was Sisu's flagship model from 1970. The maker claims that a dozen are still operated commercially



The E12 was the first model offered following the tie-in with Renault in 1997



This SM Model was hard at work this summer outside Helsinki hauling rock a good 20 years after it was built

Trucks with guts

THE FINNISH WORD Sisu has no direct English translation, but a close approximation is “determination”, “resilience” or – simply – “guts”, which has proven to be appropriate in respect of the trucks that have carried the name since 1931.

Early Sisuus were built in modest numbers with production in the first year amounting to a mere 12 chassis of Volvo-based design. Chief engineer Tor Nessling was appointed in 1932 and by 1935 his SH Model had paved the way for the company's progress under his directorship for the next 35 years.

The war years saw a partnership with the other Finnish truck maker, Vanaja, to produce vehicles for the army, and in the immediate post-war period, Sisu trucks were predominantly powered by wood gas, before more powerful petrol and diesel units were introduced.

By the mid 1950s, Sisu's annual production was up to 350 vehicles a year, and an agreement with Leyland Motors led to the adoption of the Lancashire firm's engines across the range.

CM visits Finland's Sisu Auto and takes stock of the activities of one of Europe's most enigmatic truck manufacturers

By **Richard Stanier**

Nessling cemented his place in European truck-making history with the introduction of the lifting bogie in 1958, and in 1962 the Sisu KB 112 was acclaimed as the first European truck with a forward-control tilt cab in series production.

Following the acquisition of the Vanaja concern in 1967, Sisu widened its engine offering to include Rolls Royce and Cummins units, and in 1970 the boxy M-series was launched with a cab that was later seen on British roads on Irish-built Dennison trucks. During 1975 Sisu sold more than 800 trucks in its home market in addition to about 100 bus chassis, and the organisation employed more than



This Cummins-powered E11 has typical Finnish machinery-carrying bodywork. A forestry forwarder is driven up the ramps and straddles the chassis



A new Polar seen in its natural habitat – hauling stone in a Nordic forest



A late model SR, one of the last of Sisu's normal-control vehicles



Sisu's Polar range uses Mercedes-Benz's engines and cabs. This example has a double-drive bogie, which can lift and disconnect to become single-drive



The 15-litre Caterpillar-powered C600 found favour with power-hungry Norwegian tipper operators



A Polar V8 equipped with state-of-the-art logging equipment. Seven axle outfits run at 60 tonnes gross train weight in Finland



The Cat-powered E18 was Europe's most powerful truck with 630hp in 2003



The ETP range is a high mobility terrain vehicle for the Finnish military

1,800 people – albeit this included staff involved in the marketing of British Leyland cars and vans in Finland, which Sisu had been undertaking since 1972. By 1976 the Finnish state was the majority owner of the company with Saab, Scania and British Leyland each holding 10%.

The S-series range featuring a modular cab design – not dissimilar but not related to the Leyland T45 concept – was launched in 1980 and was immensely popular in Finland, selling more than 700 chassis a year into the late 1980s. This range of trucks encompassed both high-mounted and low-mounted, forward-control and normal-control cabs powered by Cummins engines driving through Eaton Fuller transmissions. But the difficulties of remaining a small-scale manufacturer took their toll in the 1990s.

Bus production had ceased by 1989 and 1995 saw Sisu's axle manufacturing business sold off. The S-series' successor, the E-series, was in production for only a year from 1996 before Sisu sought a collaborative deal with Renault VI in 1997 for components, and Partek acquired the company. Under Partek, ownership of the terminal tractor side of the business – which was already a separate business unit – was combined with Kalmar, and truck production continued using Renault Premium cabs, Mack E Tech 12-litre engines and Renault B18 gearboxes.

The Renault-cabbed range carried the designation E12,

but these trucks were not merely badge engineered. The cab was restyled and higher-mounted than the Renault, and Sisu retained its heavy-duty chassis and comprehensive axle configurations. Most typical of these is the Finn Bogie, which consists of a 3-axle arrangement of a hub-reduction axle in the centre with a lifting pusher-axle in front, and another lifting tag-axle behind. The Cummins-powered E11 and E14 models followed with Eaton synchromesh or Fuller constant mesh transmissions.

The new range consolidated Sisu's standing in the Finnish market, and the Renault connection helped its export efforts too, with the French army purchasing 110 tank transporters and the 10x4 chassis, a Sisu speciality since 1988, being offered to the Swiss market through Renault VI. Caterpillar 13-litre and 15-litre engines joined the range and in 2002 Sisu enjoyed the prestige of offering Europe's most powerful road-going production truck with the Caterpillar 18-litre E18, which generated 630hp.

When the Partek Group was acquired by the Kone engineering concern in 2002, the future of a small niche – builder of trucks – looked uncertain, and Sisu was acquired by an investment consortium in 2004. At this point a facelifted version of the Renault-cabbed range remained in production but a series of events developed in the light of falling sales that asked questions of the

business's long-term viability. Firstly, assembly operations were outsourced to the Komatsu company in 2009 and in 2010 the sales of civilian vehicles were subcontracted to the Veho Group, which had also been responsible for aftermarket services since 2007.

Civilian truck production was suspended in 2008/09 because of a lucrative contract from the Finnish Defence Force for 232 4x4 trucks and 60 E13TP 8x8 vehicles. Sisu has long been successful in the military vehicle market and the Lithuanian army has also been equipped with the high-mobility 8-wheelers since the late 2000s.

By 2010, the arrangement with Renault was at an end, and the Sisu story took a turn with a new agreement, this time with Daimler-Benz. The Polar range of trucks consists mainly of heavy-duty multi-axle rigs powered by either Mercedes OM 501LA V6 diesels of 480hp, or OM 502LA V8s rated at 550hp or 600hp. The transmission options include Mercedes PowerShift automated or Telligent synchronised units alongside the Fuller constant mesh 18-speed box for traditionalists. The Mercedes Actros cab is used, with the current version being adopted with suitable Sisu styling in 2014, and Arocs electrical systems are employed with adaptations made for Nordic operating conditions.

Since 2013 Sisu has been under the sole ownership of Timo Korhonen and all sales, manufacturing and assembly work is in-house. There is a spirit of optimism at the Karjaa factory situated in the south western tip of Finland, and the company now has a workforce of more than 200. Truck production is still low at one or two chassis per week, but hopes are high for the latest Polar model and the high-mobility military chassis are offered to civilian operators for oil exploration and similar roles.

The factory is developing its consultancy function, which has found custom in China and a recent order for

Polar trucks to be used as support vehicles by Kamaz Autosport has raised eyebrows given the Russian manufacturer's own specialism in tough off-road vehicles, albeit at the other end of the technological spectrum.

Sisu regards its strength to be the custom building of chassis for specific operations in the Nordic market. Its ingenious range of axle and bogie combinations, which includes a drive disconnection capability on double-drive units, are mounted to a frame designed for the operator's purpose, meaning that no surplus chassis holes are required. Bodywork is specified to the chassis at the order stage and the factory will build complete vehicles for delivery directly to the operator.

A truck of such quality naturally carries a price premium but Sisu are still highly regarded in their home country in the core forestry, bulk aggregate, construction and machinery removal sectors. Export of civilian models is difficult, although Norway and Russia have taken deliveries recently, and there is no immediate likelihood of an appearance in the UK. Importation was attempted twice in the 1970s, and considered thereafter, with the most recent thoughts centred on a possible exploitation of the gap left in the market by Foden in 2006.

In a surprising move, Sisu's management acquired the FAP truck-building concern from the Serbian government. While there does not immediately appear to be any synergy between the high-tech Finns and FAP's rather elderly Mercedes NG-based production, it will be interesting to see how this develops.

Although Sisu remains a niche player in the European market, its survival in the 21st century, particularly with its all-conquering Swedish neighbours, is testimony to the quality of the trucks and the people who make them. ■



This SH 6 from 1936 is a legendary vehicle in Finland, having covered two million kilometres in 45 years' service with the same operator

Older models like this 1970s L Series can still be found lurking around industrial estates in Finland

