

# AVANT<sup>®</sup>

## magazine

Avant Tecno customer magazine 2023



Avant e513 and e527:

# A new era for fully electric loaders

p. 4

New Avant 635i and 640i – More torque and higher oil flow [p. 14](#)

Machine weight matters [p. 26](#)

## The right choice.

### ✓ **Versatile**

Professionals love the versatility of the Avant as it lets them perform multiple tasks with one machine year-round.

### ✓ **High quality**

The Avant is manufactured in Finland according to the highest standards, using only high-quality materials. Avant loaders are backed by a 24-month warranty.

### ✓ **Articulated chassis**

The articulated chassis allows the loader to make tight turns without causing damage to sensitive surfaces. The rigid articulation joint makes the loader incredibly stable, even on demanding terrain.

### ✓ **User-friendly**

Articulated Avant loaders are very easy and safe to operate thanks to the basic controls and a unique hydraulic connection system. The ROPS safety frame with the FOPS canopy, side entry to the operator station, and low center of gravity make it a safe solution for every job site.

### ✓ **Back-up**

Representation of reliable partners all over the world creates security for the use of the machine. Locally stored spare parts and a local service network guarantee minimal downtime.



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**200**  
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### **Avant loaders and attachments**

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# Editorial

In the coming years, the non-road machinery market will be electrified at a rapid pace, just like the car market, and this electrification will start most strongly in the compact machine sector. Avant is in a rather interesting position in this sense. We have been investing in electric loaders for years, and now we are taking another big step. In this issue, we present Avant's renewed, fully electric e series, which for the first time features Avant's own battery packs designed and manufactured in Ylöjärvi, Finland.

Such electric machines have not yet been seen on the market. At best, the new e500 loader already has an operating time of six hours, which is almost always enough to complete the entire working day on a single charge. As a result of the upgrades, the purchase price of the machine has also decreased significantly, and now we are able to show that the e500 electric loader will be cheaper compared to a diesel loader with similar life cycle costs after about three years. It is also significant that Avant's electric loaders can now work efficiently in both hot and cold conditions. Read more about our new e series on pages 4–9.



In Finland, besides investing in product development, we have renewed the loader factory's production line (p. 20). The line renewal is part of our plan to increase production in the coming years, but the new line also increases flexibility and enables better quality production and better working conditions for our employees.

We also made significant changes in our spare parts warehouse. We tripled the surface area and improved the flow of work in the warehouse in numerous ways. All this, of course, is aimed at better service capability of spare parts and faster deliveries around the world. The spare parts warehouse in connection with the Ylöjärvi factory now has 6,000 m<sup>2</sup> of storage space, and a team of 12 people serves our customers in Finland and export countries.

Let's keep the wheels turning.

**Jani Käkälä**  
CEO, Avant Tecno Oy

## Avant Tecno Customer Magazine 2023

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Island project with Avant, p. 22.



# Starting a new era

**Our fully electric e series is renewed.  
At the turn of the year, the first loader  
models equipped with Avant's own  
batteries will enter production.  
Thanks to their exceptional features,  
the new Avant e513 and Avant e527  
loaders will change the market in  
many ways.**



# for electric loaders

This is what the market has been missing! The new fully electric Avant e527 loader features an advanced battery. With a fully charged loader, you can work all day. The patented battery technology of the new loaders is one of the many innovations of the Avant Group.





# The new Avant e513 and Avant e527

## World-leaders in fully electric compact loaders

**These third-generation Avant electric loaders further improve the capacity, pricing, safety, working time, durability, and lifespan of electric machines. Working with an electric loader has never been this efficient!**

**H**ere they are, Avant's latest source of pride: two next-generation fully electric loader models, the Avant e527 and Avant e513, which will enter production in the beginning of 2024 and renew Avant's fully electric e series. The models will replace their predecessors, the Avant e5 and Avant e6 models.

The biggest change compared to previous electric loaders is that these new loaders are equipped with Avant's own high-quality batteries. The battery packs are designed specifically for compact loaders, and their patented, globally unique Avant OptiTemp® technology makes the loaders exceptional in many ways. Thanks to our own batteries, the price-capacity ratio of electric machines has now been brought to a whole new level.

The Avant e513 has a smaller battery with a capacity of

13 kWh. The Avant e527 with a larger battery has a capacity of up to 27 kWh, double that of the previous Avant e6. The operating time of the Avant e527 is unprecedented in the electric loader market.

### **Operating time up to 6 hours**

The 13-kWh battery gives the Avant e513 loader about three hours of operating time, and the e527 has up to six hours of operating time for medium-duty loading work, which is enough to work a full day on virtually any jobsite.

"There hasn't yet been an electric loader on the market that could achieve this kind of operating time. In that sense, we have now reached a completely new situation," says **Jani Käkälä**, CEO of Avant Tecno.

We have managed to bring the loader's operating time

to this level because we have invested heavily in the product development of our own battery technology.

### The magic lies in the battery

The batteries for the new loaders are designed and manufactured by Avant Power, which is Avant's newest subsidiary in Ylöjärvi, Finland.

"We are number one on the market in terms of energy density, i.e. how much energy has been fitted into such a small space. With an electric loader, you can now work more efficiently than ever," says **Mikko Piepponen**, COO of Avant Power, and the man behind the new battery technology.

Thermal management has traditionally been a challenge in batteries, but now the problem has been overcome. The new batteries utilize globally unique Avant OptiTemp® technology. In our own immersion cooling technology, all battery cells and components are immersed in a special liquid, OptiTemp Fluid, which cools or heats the battery when needed. The system keeps the battery temperature optimised whenever the loader is either in use or connected to the charger, and work is equally efficient in the summer and winter. When connected to the charger, the battery preheats itself automatically before use in cold weather, and preheated batteries perform excellently even in severe frost.

The safety of the batteries is also top notch. The OptiTemp Fluid inside the battery keeps the heat constant throughout the battery, and the effective heat transfer to the liquid prevents individual cells from overheating in the unlikely event of a failure. Together, the OptiTemp® system, the design of the batteries, and the bonding technology create multi-layered protection for the batteries and make them extremely safe.

Based on accelerated life cycle tests, OptiTemp Fluid extends battery life because the cells are cooled very evenly in the liquid. The temperature of the cells stays optimal and even throughout the battery.

Avant's electric loaders are now clearly less expensive than competitors' products. Mikko says that the price of the battery has been brought down thanks to Avant's own battery production.

"We have already made high-volume solutions on the battery side, which means that we have immediately developed the structures so that they are intended for high volumes. Since we have invested heavily in product development, we've been able to create a serial product that is more affordable."

If a customer wants to upgrade their old Avant e5 or e6 loader with a new battery, it is possible. However, it should be noted that replacing the battery alone will not lead to the performance of a new loader. The retrofit battery pack includes a battery pack, battery wiring harness, software update, and installation.

The battery capacity of the new loaders in relation to the price is superior.



The Avant e527 is a highly anticipated electric loader: it is powerful yet reasonably priced, the operating time is significantly longer than before, the loader performs unrivalled in both cold and hot working conditions, and safety is world-leading class.

## Increased performance and modern appearance

In addition to batteries, development has also taken place on the loader side. Product Development Engineer **Lauri Rantanen**, who was responsible for the loader design of the new models, is pleased that the electric machine has now been brought closer to diesel machines regarding performance.

“However, we were not aiming for absolute diesel machine performance in all situations and attachment use, but rather to build an electric loader whose basic performance characteristics, such as traction and lifting force, would be similar to diesel machines,” Lauri says.

The cooling system of the electric motors and inverters has been improved, which increases load resistance during short-term hard work. The new heat sinks improve cooling efficiency, and they keep the machine’s heat under control also when working in soft, rough terrain.

“One major and visible change is the renewed appearance of the loaders, which means that the e series now has the same appearance as Avant’s recently redesigned 500 and 600 series diesel loaders. The controls and switches are the same as in the latest diesel loaders. In addition, the options are largely the same, which means that in the future, it will be possible to equip these electric loaders with a GT cab,” Lauri says.

## Fast charging in 1.5 hours

The new loaders have an onboard 230 V / 16 A battery charger as standard, and a rapid charger is available as an option.

“The maximum charging current of the standard charger has been increased by 50 per cent compared to our previous electric loaders. The loaders are charged with the Type 2 charging connector familiar from electric cars, so they can be charged from any charging point in the public infrastructure if there is no access to a private electricity supply,” Lauri says.

Both loaders can be fully charged with a rapid charger in just 1.5 hours, allowing for long working hours. Avant’s old rapid charger is compatible with the new loaders.



## Power for demanding professional use

The Avant e513 and Avant e527 are largely equivalent to the 500 series of diesel engines. The loaders are outwardly identical, and the only difference lies in the capacity of the batteries.



- Battery capacity 13 kWh.
- A good choice for intermittent use, e.g. for cattle farms, horse stables, garden greenhouses, or for DIY private use and leisure.



- Battery capacity 27 kWh.
- The Avant loader with the larger battery is suitable for demanding professional use. Great choice for construction and demolition contractors. No need to charge the machine in the middle of the working day.



## Charging times ⚡

	Avant e513	Avant e527
Onboard charger 230 V / 16 A (standard)	5 h	10 h
Rapid charger 400 V / 16 A (option)	1 h 30 min	2 h 45 min
Rapid charger 400 V / 32 A (option)	–	1 h 30 min

Quoted download times are estimates. Charging time is affected by prevailing conditions and temperature.

The new loader models are otherwise identical, but the Avant e513 has a smaller battery (13 kWh) and the Avant e527 has a larger one (27 kWh).

## Avant e513 & Avant e527 in a nutshell

	Avant e513	Avant e527
Voltage	44 V	44 V
Capacity	13 kWh	27 kWh
Operating time*	3 h	6 h
Lift capacity	950 kg	950 kg
Lift height, max.	2 790 mm	2 790 mm
Drive speed, max.	10 km/h	10 km/h
Weight	1 420 kg	1 500 kg
Auxiliary hydraulics	30 l/min	30 l/min

\*In medium duty loading work;  
no hydraulic attachments used.

### Top features of the new e series

- ✓ **CAPACITY UP TO 27 kWh.** The battery capacity of the Avant e527 is double that of its predecessor, the Avant e6.
- ✓ **OPERATING TIME UP TO 6 HOURS.\*** Operating time is now on a whole new level: with the Avant e527, you can work a full day on a single charge.
- ✓ **FAST CHARGING IN 1.5 HOURS.\*\*** Extremely fast charging with a rapid charger allows you to work long hours. Avant's old rapid charger is suitable for the new loaders.
- ✓ **PRICE.** Thanks to Avant's own batteries, the sales prices of electric loaders are more than €10,000 lower than those of other manufacturers.
- ✓ **SECURITY.** Combined, the unique safety solutions of Avant OptiTemp® batteries – battery design and thermal management system – ensure the utmost battery safety.
- ✓ **OPERATION IN ALL CONDITIONS.** The battery's unique thermal management system keeps the temperature optimal and ensures a great capacity in both hot operating conditions and severe frosts.

\*Operating time is affected by many factors, such as the weight of the machine and the load, working conditions, time of year and prevailing temperature, and the way the machine is used. Therefore, the stated operating time should not be taken as an exact figure.

\*\* Current conditions also affect charging time. ●

# NEW ATTACHMENTS

## Compatibility

✔ Very compatible  
 + Compatible  
 ✘ Incompatible

## Electric salt spreader

The electric-powered salt spreader is top-loading and features a traditional bucket design just like similarly sized sand spreaders, but this attachment is intended specifically for spreading road salt. The robust salt spreader is made of hot-dip galvanized steel, and the spreader and mixer shafts are made of stainless steel. The spreader can be mounted on the front or rear of the loader. Rear mounting is recommended especially for regular and heavy use, so that salt dust does not cause corrosion to the loader.

The salt spreader is powered by a 12 V electric motor. Electric current is supplied through a control switch pack (available as an option to the loader), and the engine is started and switched off using the switches in the pack. The control switch pack also adjusts the speed of the salt spreader. Spreading amount can be adjusted in two ways: the basic adjustment is done with a lever on the side of the spreader, and during driving, the rotation speed of the spreading shaft is controlled with the switches on the control switch pack. Maximum rotation speed is recommended for high drive speed on open areas, and reduced rotation speeds (4 speed areas) only when slower drive speed is necessary.

Two options are available in switch packages, and the choice is made depending on whether the salt spreader will be mounted on the front or rear of the loader.

Volume	170 l
Working width	1 000 mm
Total width	1 165 mm
Height	655 mm
Length	630 mm
Weight	110 kg
Product no	A454073

**Front mounting:** Opticontrol® control switch package

**Rear mounting:** Control switch package for rear-mounted attachments (magnetic; installed in a convenient location in the cab). Rear mounting on the attachment plate is possible in loader models 528 & 530, and in 600–800 series loaders. In 700 and 800 series loaders, rear mounting on the hydraulic tipping rear lift is also possible.

### OPTIONS

#### Attachment option:

A429959 Rear lights (require the optional 7-pin trailer socket on the loader)

#### Loader options:

A455026 Rear mounting plate, 528/530 & 600 series

A441613 Rear mounting plate, 700 series

A441666 Rear mounting plate, 800 series

A427547 Hydraulic rear lift, 700 series

A438490 Hydraulic rear lift, 800 series



- 220 ✘
- 225 ✘
- 313S ✘
- 320S ✘
- 320S+ ✘
- 420 +
- 423 +
- 520 ✔
- 523 ✔
- 528 ✔
- 530 ✔
- 630 ✔
- 635 ✔
- 635i ✔
- 640 ✔
- 640i ✔
- 645i ✔
- 650i ✔
- 735 +
- 755i +
- 760i +
- 860i +
- R28 ✔
- R35 ✔
- e5 +
- e6 +



## Sand spreader 1500 and 2000

These robust sand spreaders for professional use are Avant's largest sand spreader models. The hydraulic sand spreaders 1500 and 2000, with volumes of 640 liters and 850 liters respectively, are intended for 700 and 800 series – the larger 2000 model for 800 series only.

The sand spreaders are front mounted only and feature a bucket type design which allows loading like with a normal bucket. As standard, spreading amount can be adjusted with a lever, located on the side of the spreader. Electric spreading amount adjustment is available as an option. The spreaders are equipped with a mixing shaft which prevents the sand from clogging, and a rubber blade under the spreading shaft prevents the sand from coming out by itself. The spreading shaft is made of durable Hardox steel. Two support legs for free standing are standard equipment. A durable cover to protect from moisture and spillage is available as an option.

### OPTIONS:

- A460233 Cover, Sand spreader 1500
- A459651 Cover, Sand spreader 2000
- A457917 Electric spreading amount adjustment

Model	1500	2000
Volume	640 l	850 l
Working width	1 500 mm	2 000 mm
Total width	1 682 mm	2 182 mm
Height	1 052 mm	1 052 mm
Length	1 045 mm	1 045 mm
Weight	305 kg	375 kg
Product no	A458004	A457676

	220	225	313S	320S	320S+	420	423	520	523	528	530	630	635	635i	640	640i	645i	650i	735	755i	760i	860i	R28	R35	e5	e6	
2000 1500	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✗	✗	✗	✗
2000 2000	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗

# NEW ATTACHMENTS

## Compatibility



Very compatible



Compatible



Incompatible



## Lawn aerator 1100

The Lawn aerator 1100 is an effective and compact lawn care attachment. The fully mechanical unit is pushed with a loader, and its blades make holes in the lawn as they rotate. Thanks to this, the roots get air, water, and nutrients, allowing the grass to grow better and the lawn to remain healthy.

The aerator has 90 knife-like blades in nine rows. The working width is 1100 mm, and the working depth is 150 mm as standard. There are no support wheels on the aerator: on harder ground, only the tines are in contact with the ground, and on soft ground, the shaft will act as support. The tines can be bolted in two different heights on the shaft, so the working depth is either 110 mm or 150 mm (standard). If necessary, the 29-kilogram Avant back weights can be mounted on both sides of the attachment to add weight. The aerator is also equipped with four mechanical support legs for storage. Solid round tines are available as an option.

### OPTIONS:

A457278 Solid round tine

A35957 Back weight 29 kg

Working width	1 100 mm
Total width	1 400 mm
Length	1 700 mm
Height	950 mm
Number of tines	90 pcs
Weight	240 kg
Product no	A453046



# Snow broom

The snow broom is a powerful rotary broom designed for efficient snow removal of sidewalks, yards, parking lots, pedestrian and bicycle paths, and more. Snow removal and salt or sand spreading can be done on a single drive with the broom in front and sand or salt spreading at the back.

The Snow broom features the same nylon brush and hydraulic motor as the original Rotary broom without the vertical floating in the mounting frame. Instead, the brush is supported by two support wheels with solid tyres (the same tyres as in the Collecting broom 1500). Thanks to the

support wheels, the broom moves and steers lightly while maintaining a constant working height. The height of the support wheels can be adjusted with the nylon spacers on the yoke of the wheel.

There are three models available: 1100 mm, 1500 mm or 2000 mm in working width. The 1500 and 2000 models are equipped with +/- 5° sideways floating for better handling and contact with the ground, not required on the 1100 broom. Hydraulic brush turning +/- 30° is standard on all models.

Model	1100	1500	2000
Working width	1 100 mm	1 500 mm	2 000 mm
Total width	1 390 mm	1 790 mm	2 290 mm
Height	625 mm	625 mm	625 mm
Length	1 100 mm	1 100 mm	1 100 mm
Weight	170 kg	196 kg	216 kg
Turning angle	+/- 30°, hydraulic		
Product no	A454767	A457611	A457678



2000	220	225	313S	320S	320S+	420	423	520	523	528	530	630	635	635i	640	640i	645i	650i	735	755i	760i	860i	R28	R35	e5	e6	
1500	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
1100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

# Kicking into a new gear – Upgrades in loader series and production



**We have modernized our production at our loader factory in Finland and updated the 500, 600, and 700 series. For customers, this means cutting-edge Avant loaders with even more reliable deliveries.**

**A**vant Tecno's goal is to create the best assembly line in Europe at the Ylöjärvi factory, which will accelerate the production of our first-class compact loaders. The most significant shift in our company's history involved transitioning from two separate assembly lines to a single new one. Additionally, we undertook a major renewal of the 500, 600, and 700 series loaders.

“In spring 2022, we successfully introduced the Avant 645i and 650i models. Our goal was to incorporate the modern design and improvements in hydraulics, electrical systems, and usability from these models into our other loader models, while also updating our production process,” says Project Manager **Ari Pesola**, who coordinated the large project.

Production modularity, i.e. using consistent parts across different models, enhances machine maintainability. A single assembly line boosts efficiency in production and quality control, elevating Avants’ quality and reliability. With such a system, delivery times become more fixed as production adapts swiftly to varying demands for different loader model series.

“The staff of Avant Tecno worked committedly for a couple of years to get the model series updates and the assembly change implemented. It’s good to continue from here”, Ari says.

### Upgraded electric systems and hydraulics

With the recent updates, features from our advanced loader models are now also available to users of smaller machines, either as standard or optional equipment. Our electrical systems are renewed, and we’ve made notable improvements in hydraulic performance. For instance, all loaders from the 500 series onwards come with a standard multi-display and have the option for the ergonomic GT cab.

The power distribution unit (PDU) and the vehicle electronic control unit (VECU) introduce features that further bolster usability regarding main power cut-off and the integration of protective devices, for example.

Details of the new 635i and 640i models are discussed on the next page. With the renewed Avant 735, boom floating comes as standard equipment, like with the 600 series. This feature improves working in uneven terrain with a plow or a snow blower, for instance.



Avant 635i and Avant 640i became available in the summer. The new engine significantly improves the usability of the loaders.



## Updates in the loader series

	500-series	635i/640i	735
Familiar and reliable diesel engines in the 500 series	✓		
Electronically controlled Kohler KSD 1403 engine		✓	
Design and cover panels following the modern appearance of the 645i and 650i models	✓*	✓	
Multi-function display as standard	✓	✓	✓
Fully upgraded electrical system	✓	✓	✓
PDU (Power Distribution Unit) and VECU (Vehicle Electronic Control Unit)	✓	✓	✓
Boom floating as standard		✓	✓
Optional GT cab starting from model 528	✓	✓	✓

\* not in the Avant 523 model

# New Avant 635i and 640i:

## More torque and high oil flow with the Kohler engine

**The new 600 series models, Avant 635i and Avant 640i, replace the previous 635 and 640 models. The new electronically controlled Kohler KSD 1403 engine provides tenacious torque and increases the auxiliary hydraulics oil flow to up to 66 liters per minute.**

**T**he single-speed Avant 635i has a maximum speed of 12 kilometers per hour, whereas the two-speed Avant 640i's maximum speed is nearly double at 23 km/h. The auxiliary hydraulics output has increased from the previous 50 liters per minute to 66 liters per minute.

“A higher flow allows for even versatile and more efficient use of attachments. Due to the electronically controlled fuel injection, the engine adjusts precisely according to the load and responds quickly to demand. Engine responsiveness and drivability have improved, while noise, vibration, and fuel consumption have decreased,” says **Juho Jokelainen**, Product Development Engineer involved in designing the new models.

The new engine meets the latest Stage V and Tier 4 Final exhaust emission standards. Power and other features have

been optimized to 19 kilowatts, eliminating the need for a particulate filter, which in turn reduces maintenance needs. The engine's cooling capacity is also improved, and the air filter is larger, extending the replacement interval.

“The engine cooling works even if the rear grille is partially blocked. Cover panels are also easier to take off for maintenance, just like in the 645i and 650i models.”

### **Essential info from multi-function display**

From the multi-function display, you can get comprehensive information about the loader, such as engine speed, hydraulic oil flow, fuel level, instantaneous consumption, outside temperature, hydraulic oil temperature, overload alarm, total machine operating time, maintenance information, and error codes, making it easier to care for the machine.

The new 600 series loaders feature a safety-enhancing Power Distribution Unit (PDU), where most of the fuses and relays are centralized. Additionally, the loader's safety features are now controlled by the loader's electronic control unit (VECU). The new electrical system is clearer, and the PDU provides additional protection in cases of failure. Even if an electrical device would break or a mouse would chew the cables, the power will be cut by the PDU. Although the PDU doesn't replace the use of the main power switch, it gives extra protection. ●

# Boosting coffee farm efficiency in Australia

**Zentveld's Australian Coffee farm in New South Wales, Australia has a secret weapon: the Avant 860i. The loader agilely handles the work of many machines, streamlining operations at the farm.**

**W**hen John Zentveld was looking for a new efficient work machine for his coffee farm located in Byron Bay, New South Wales, a friend told him about Avant loaders. He had previously been impressed by their versatility at a fair. Based on the tip and after researching further, John ended up acquiring an Avant 860i.

Now, John is happy with his choice. As one of Avant's strengths, he cites the loader's narrow axle width which allows the machine to move nimbly between trees and rows without damaging the crop. Likewise, the light weight of the Avant reduces soil compaction compared to working

with tractors. Thanks to the various attachments acquired by the Zentvelds, work on the coffee farm is now more streamlined and versatile: attachments like excavator buckets, lifts and branch cutters expand the loader's capabilities from lawn mowers.

"Having the Avant loader with the flail mower and root grapple has revolutionized how we clean up after pruning our coffee trees," says John.

## Speeding up the harvest

The Avant 860i is also a reliable partner in maintaining roads on Zentveld's coffee farm, harvesting coffee beans, transporting waste containers and composting.



When the Avant 860i loader came to Zentveld's coffee farm, it replaced one of the tractors, a bucket on the other tractor, and a rough terrain forklift. At the same time, harvesting became more efficient, safer, and more ergonomic.

"The Avant loader with forks attached is ideal for collecting field bins and returning them to the processing area, making this part of the harvesting extremely efficient", John praises. "Next, we're keen to try out the edge trimmer attachment for maintaining rows of young coffee trees without the need to use herbicides."

## Better safety and work ergonomics

According to John Zentveld, the Avant can handle tasks that would otherwise require multiple machines and tools, such as tractors, forklifts, and off-road equipment. For this reason, the Avant has been revolutionary for harvesting and

has significantly improved the efficiency of the coffee farm.

"In addition to efficiency, the front-mounted attachments and articulated steering improve safety and work ergonomics compared to rear-mounted tractor attachments."

Overall, the versatility, maneuverability, and attachments of the Avant 860i make the compact loader an indispensable tool on Zentveld's coffee farm.

"Now that we have the versatile Avant loader, we don't need one of the tractors anymore, or the bucket on the other tractor, or the rough terrain forklift," says John. "I'm very happy with our Avant loader." ●



# Last spring's acquisition: The company's **17<sup>th</sup>** Avant!

To say British Grass Care Services Ltd is a loyal fan of the Avant brand is something of an understatement. According to company founder Adrian Smith, Avant's versatility has boosted the success of his company.

Over the past 30 years, several different Avant loader models have been in use at Grass Care Services Ltd, which specializes in grass cutting, ground and poultry site maintenance, and hedge and tree cutting.

"The Avants are perfect for the business. They are so versatile, very adaptable for different tasks, reliable and easy to transport from one job to another, so what's not to like about them?" says founder Adrian Smith, who speaks from a long experience.

"I bought my first Avant second-hand, and it just made my work so much easier, especially in tight spaces."

Over the years, the company has bought 17 machines, and currently, they are running four.

"The loaders have been integral to the successful development of my business over that time, as has been the support from the dealer, Fentons of Bourne. They have been excellent, always on hand if we have any problems, and we have had very few. I believe the machines are only as good as their back-up support, and that provided by Fentons has been second to none," says Adrian.

## Just right for landscaping

Grass Care Services recently invested in a new 640 model. With a 1.1 tonne lift capacity, the loader has proved to be just perfect. It features powerful auxiliary hydraulics which can run almost all Avant attachments – which there are over 200 of.

Adrian enjoys many features in his Avants: The standard telescopic boom gives a great outreach when the boom is fully extended, and lift capacity when it is retracted. The machine's



"The Avants have been inextricably linked to the success and development of my business. We use three 640 loaders and a smaller Avant 528 with grass tyres. We use them in gardens and lawns. Customers are happy when we don't leave deep grooves or tire marks on the ground," says Adrian Smith, founder of Grass Care Services.

excellent all-round visibility and stability due to the low center of gravity get appraisal, too.

The hydraulic multi-connector system for coupling the attachment's hydraulic hoses guarantees easy and effortless connecting and detaching with just a single hand movement. Connecting can be done with the engine running. The mechanism is leak-free, and the attachment cannot be connected in the wrong way.

Thanks to the hydrostatic drive system, the loader is gentle on soft and sensitive surfaces when turning. The system also provides improved traction on slippery and uneven terrain. All these features have made the Avant particularly appealing to Grass Care Services.

### Good machinery expanded business operations

At the beginning of his career, Adrian Smith specialized in ground maintenance and grass cutting on his client's poultry farms. When a larger company bought the customer's

operations, Adrian gained much more work. As he removed all the equipment from inside the poultry sheds using a compact tractor with pallet tines on the back, he learnt it was not an ideal machine for the work.

“After seeing the Avant in action, I thought that it could potentially be the machine for me. It would make the job a lot more efficient and be a great tool for manoeuvring through the tight spaces in the sheds.”

After acquiring Avants, Adrian found himself using them more and more, not only on the poultry sites, but also on groundwork contracts, and tree and hedge cutting. The Avants have proven to be versatile thanks to numerous attachments such as the Root grapple, the Auger, the Pallet fork, mowers, brooms, and buckets.

“In addition to the new Avant 640, we also have two other 640s and a smaller 528 on turf tyres that we use in gardens and on lawns so that we create no wheel marks or ruts – and that leaves a good impression with the clients.” ●



Adrian Smith's two sons have set up a firewood business processing and delivering over 500 tonnes of logs per year, using the Avants with a variety of attachments such as the Timber grab and the Pallet fork for loading wood.



# Investments continue at the Avant loader factory in Finland

Avant Tecno is set to expand the production capacity of the Ylöjärvi factory in Finland, aiming for a remarkable pace of 300 loaders per week. Inspired by Toyota's customer-centric approach, we're fine-tuning our machinery and processes for peak performance.

"Our roadmap to 300 loaders per week is clear, and we're actively laying the foundation for this achievement," says Saku Vastamäki, Vice President, Production at Avant Tecno.

There are several strategic moves in the pipeline: investments in state-of-the-art machinery, expansion of facilities, and training the newly recruited staff.

Momentum is building. The Avant loader factory has already increased its production capacity to 175 loaders per week. Recent enhancements include the deployment of new cutting technology, increased automation in welding, and refined systems for internal logistics and warehouse management.

Saku Vastamäki showcases a brand-new machining FMS cell for the machining of telescopic booms and frame joints.



Left: Vice President, Production Saku Vastamäki and Production Development Manager Juha Linnusmäki.

Saku notes the symbiotic relationship between technological advancement and production: “Beyond the visible enhancements such as new features and an even better quality, our loaders have also been streamlined for easier manufacturing.”

### Toyota philosophy and peer support

“When the production line is complete, it’s like a symphony orchestra where all members are playing seamlessly together. And the customer makes the piece requests,” sums up **Juha Linnusmäki**, Production Development Manager at Avant Tecno.

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The new assembly line combines efficiency and flexibility.

According to Juha, the production philosophy of Japanese vehicle manufacturer Toyota has been an inspiration and a guiding principle in planning the new production machinery at Avant.

“Toyota’s methodology centers around the customer: Every step taken aims to add value for the customer. If our customer base demands that we increase our production capacity, or they hope us to enhance some features in our loaders, we strive to address these needs”, Juha explains.

In Juha’s eyes, the production line at the Avant factory is made up of several internal customer bases — primary production, assembly, logistics, and so on.

“Collaboration between these functions and constant refinement are key. This is where feedback and initiatives taken by our teams become invaluable. We have an array of methods in gathering data.”

Emphasizing the importance of collective wisdom, Saku Vastamäki adds, “Beyond our internal expertise, collaborations and partnerships have played a pivotal role in our journey towards production excellence. At Avant, we pride ourselves on our open dialogue with industry peers.”

## Major assembly line overhaul allows firmer delivery times

The monumental target of churning out 300 loaders every week relies on an unprecedentedly large production line. Last summer, the previous two smaller assembly lines were replaced, and production was centralized on one large 38-stage assembly line. The new production line is geared to manufacture all loaders from the 400 series to the 800 series. The reform in the manufacturing system is the largest in the history of Avant Tecno.

“The design of the new assembly line has been based on studying the dynamics of the line and the different stages of the work. As a result, Avant’s awareness of how loaders are built is at a completely different level than it was two years ago. The precise knowledge and optimization of the lead times of the different stages enables smoother and more efficient production and firmer delivery times,” says **Niko Paukkunen**, the Development Engineer responsible for the design of the production line.



Development Engineer Niko Paukkunen was in charge of designing the factory’s new assembly line.

## Newly renovated warehouse improves spare parts distribution and service

In December, Avant Tecno’s spare parts warehouse and service department moved to new premises at the Ylöjärvi factory.

“The new spare parts warehouse offers even more comprehensive and faster spare parts service,” says **Lari Bamberg**, Spare Parts Engineer chief designer of the new warehouse.

According to Lari, the new facility has gone through a complete transformation with the aim of providing the most efficient and seamless spare parts service possible. Under the hood of the warehouse renovation are major upgrades to storage and distribution technology, among other things. For example, the picking process will make more efficient use of automation.

“Our spare parts team are true Avant specialists – they can answer any product related question thrown their way,” Lari states. “As we now have better and significantly bigger premises for the aftersales department, our spare part deliveries are sent to the world even faster than before. We make it a priority to keep our customers’ wheels turning smoothly around the world.” ●

# Island makeover project: A real Avant-garde adventure

What happens when you have a Finnish comedy production company rebuilding an overgrown island with an Avant 650i? You get stuff done, of course, and a bunch of great work videos conveying genuine enthusiasm for the green machine. We talked to the dynamic duo Janne Kaperi and Kai “Kaitsu” Rininen about their island project and Avant’s performance so far.

“**T**his island thing started from the idea of all successful people having their own island. So, before the world crowned us moguls, we decided to buy one – because, who knows? Success might just follow,” Kai “Kaitsu” Rininen jokes.

Originating from snowboarding videos by Kaitsu Rininen and **Janne Kaperi** at the dawn of the 2000s, Finnish production company Biisonimafia has later morphed into a veritable comedy group of the social media age. With content ranging from quirky sketches to candid lifestyle escapades, these Finns have donned many hats, construction helmets included.

“We thought about making a bigger and longer construction story, and the island came along first just as a joke. But the idea was good, and it got Avant folks excited, too,” Janne recounts the commercial cooperation.

## Biisonimafia

- Founded by Janne Kaperi and Kaitsu Rininen.
- Produces content for social media platforms.
- Directs and produces films, advertisements and other video productions.
- First movie: MCHelper – BeKINGS (2022).
- Biisonimafia Adventure vlog channel on YouTube showcases the island project with Avant 650i.

 @BiisonimafiaAdventure

Images: Biisonimafia



## Agile Avant thrives on cramped island

In the spring of 2023, the island on lake Saimaa sported nothing but battered shacks and a shoreline thick with nearly unpassable vegetation. But in July, the makeover project picked up as the Avant 650i and its attachments docked at the island. While Kaitsu had some experience with tractors and Janne with telehandlers, the Avant was a new acquaintance for both.

The Biisonimafia island project videos convey a boyish enthusiasm and sense of wonder when the loader and attachments get down to business. On the videos, Kaitsu playfully describes working with the Avant as a “Manager level job”. Soon, the shores and pathways begin to emerge, stumps vanish, land smoothens out, and decaying wood stacks bid their adieu.

“Avant is just insanely feisty for its size! The island is very cramped with uneven terrain, so probably nothing else could have worked here so well,” Kaitsu says.

## Attachments for clearing and making firewood

On the island stands a log-crafted main edifice along with a sauna and some storage buildings. The most ramshackle of them met their fate in the jaws of a Demolition Grapple

Bucket. That’s when, to everybody’s surprise, a relic emerged from under the debris: a wartime GMC truck crew carriage, masquerading all these years as a humble shed.

“Now, the game plan is to revive the carriage into, say, a bar. We’re also eyeing harbor refurbishment, breakwater touch-ups, and a new summer kitchen,” says Kaitsu.

During makeover, Janne and Kaitsu got rid of roots and stumps with a Root Grapple and cleared paths and the shoreline with a Mini Digger and a Stump Grinder. They utilized the Horizontal Log Splitter to make firewood for the sauna – the first building they renovated.

“With its attachments, the Avant is a real Swiss Army knife. After crafting stone steps with it I really had a winning feeling,” says Janne.

“For sure, the machine and its attachments boast more brains than the guy behind the wheel,” Kaitsu quips.

Kaitsu says he is a bit envious of Janne’s fast boat. With it, Janne often beats him to the island, hopping straight onto the Avant before Kaitsu gets there. But don’t be mistaken, Janne has his share of fears, too.

“One night I woke up from a nightmare: The island was finished without me! It was such a relief when I woke up and realized there’s still work to be done there,” Janne says. ●



Stumps getting rough treatment from the Ripper and Janne Kaperi. Below, Kaitsu Rinkinen behind the wheel.



# Entering the market in Brazil



Sales Manager Mario Neves, Managing Director Jere Pitkänen and After Sales Manager Ivan Conti Fernandes are the dream team of Avant Tecno do Brasil.

**Avant's newest sales company has been fully operational for about a year in the main state of Brazil, São Paulo. The local Avant team gave us the latest news.**

**H**ome to 203 million people, Brazil is as big as the whole of Europe on the map. The top ten economy has a considerable market for machinery – in 2022 alone, almost 69,000 agricultural machines and about 40,000 construction machines were sold. A huge market, yes, but also one of the hardest ones to enter due to strict regulation and bureaucracy.

Avant has had a sales company in Brazil for a few years now. The initial investments included heavy paperwork and importing a good number of machines, attachments, and spare parts. Now, we are selling the products and seriously entering the market.

“We are present in 3 of Brazil's 26 states and currently building our dealer network. Our own sales company is in São Paulo where we are selling Avant loaders directly. We are also negotiating directly with the seven largest compact equipment rental companies in Brazil, which together have more than 1500 compact machines,” says **Jere Pitkänen**, the Managing Director of Avant Tecno do Brasil.

“The quality of the Avant dealer network is very

important to us, and the dealers must also have good after sales to become our dealers,” adds After Sales Manager **Ivan Conti Fernandes**.

**Mario Neves**, Sales Manager Latin America, agrees. He is responsible for introducing the Avant brand in Brazil. “Our loaders are something new at the market, so we still need to tell our partners and customers that we are a Finnish company that makes high quality products. We are in the stage of selling the Avant concept to Brazilians – letting them know that there is another way of working besides using mini tractors or skid steers,” says Mario.

## **A machine for the new generation**

According to Jere Pitkänen, there are now Avants at work on various Brazilian sites and customers.

“They are operating in diverse sectors and regions, so we have a good testbed ongoing locally to see in which uses our loaders will have the best results. In Brazil, the environment aspects vary a lot from region to region. The soil, for example, can be soft and sandy or reddish and hard as stone.”

Historically, agriculture is one of the foundations of Brazil's economy. While the initial focus was on sugarcane, Brazil eventually became the world's largest exporter of coffee, soybeans, beef, and crop-based ethanol.

“The production sites are huge, and they operate big, autonomous high-tech machinery at the fields already. We

believe that we can have a good entering for smaller scale producers, mainly the meat and poultry producers. Besides agriculture, we have been contacted by customers who work in construction, demolition, landscaping, ground care, and property maintenance,” Jere says.

It is still hard to say which segment will become the most important one in Brazil.

“I would say that one important customer group are the young generation farmers taking over their parents’ farms. They are making careful calculations of the costs on their farms and realizing that with such low diesel consumption, Avant is a very good choice for them. They need small machines that can do various tasks, and Avant is practically made for that”, Jere says.

### Not a totally unknown brand

The Finnish-Brazilian Avant squad has participated in some of the main international trade shows in Brazil, and in the future, the message will be spread at local fairs and through digital marketing.

“We had several visitors at the big trade fairs who said they had already seen Avant on the internet or at events outside of Brazil. Their feedback of our presence in Brazil were very positive and welcoming,” says Jere.

“This year, we sold an Avant 523 based on a post on Instagram. The customer saw it and got in touch, saying that he had been

looking for a machine like the Avant for 3 years. He already knew us from our YouTube channel, but he didn’t know we were in Brazil. The next day, he drove 450 kilometers to visit us and to buy the machine”, Jere recalls.

Many skid steer users are turning into Avant fans around the world.

“Besides the diversity of attachments, we only need to show the benefits from operating costs, and the people are amazed. The customer who bought the 523 is loving the fact that the Avant consumes approximately 2 liters per hour.

He used to have skid steers,” Jere says. ●



# Machine weight and versatility matter



**In Kävlinge, southern Sweden, JTF Markentreprenad AB provides tailored property management services. Company owner Fredrik Thulin is passionate about Avant loaders that can be easily transported to customers. “Avant’s biggest advantage is the wide range of attachments.”**



“Our focus is on providing machines that promote a good working environment and reduce the burden on our staff,” says company owner Fredrik Thulin from JTF Markentreprenad.

**E**stablished in 2002, Swedish JTF Markentreprenad focuses on property management all over southern Sweden. The company is based in the town of Kävlinge.

“Our idea is to tailor optimal solutions for each customer’s property. We carry out all kinds of jobs from essential property maintenance to gardening and earthworks. We also have established collaborations with other industry experts in electricity, plumbing and ventilation, for example,” says company owner **Fredrik Thulin**.

There is a growth ambition in the horticultural sector, where the company invests in equipment that is both highly efficient and gentle on the environment.

“Our focus is on providing machines that promote a good working environment and reduce the burden on our staff. We strive to create a future where work processes are efficient, environmentally friendly, and healthy for everyone involved,” says Fredrik.

An important part of the future direction is to establish a rental business for Avant loaders and attachments.

“Our goal is to offer customers the opportunity to rent attachments from us, especially those that are used less often and where the purchase does not feel economically justifiable. Our purchasing strategy in terms of attachments is based on our customers’ needs, as well as on what we find interesting,” Fredrik explains.

## **Easy transportation gives freedom**

JTF wants to be able to transport their machines to customers with passenger cars, i.e., drive with trailers that can be loaded with a weight of up to 3500 kg.



JTF wants to transport their machines to customers on trailers. The Avants' low own weight allows a wide range of attachments to be transported, too.

“Not being dependent on truck transport gives us flexibility and freedom, and we also keep costs down. It’s about creating independence and efficiency in our workflow,” says Fredrik.

Over the years, JTF has tried many different machines. To keep the total weight of the load down, Fredrik has chosen – and stuck with – Avant loaders. Among other things, he has invested in an Avant 760i because of its low weight and impressive capacity.

“I also considered the Avant 860i but felt it was a bit too heavy. We always want to bring several attachments with us when we go out to a customer. Avant is a fantastic tool carrier, it doesn’t just work as a loader, but its biggest advantage is the wide range of attachments that are well-proven and easy to use,” says Fredrik.

### Versatile work at a customer’s estate

It is an autumn afternoon, and JTF is visiting a customer. Two Avants and several attachments will carry out the booked work at Svenstorp’s estate, but JTF will also carry out a viewing for the property owner to illustrate what additional services the company can offer.

The attachments used and demonstrated today include the Front rake, the Rotary broom, the Root grapple, and the Log grab for bigger logs. JTF has also brought a Roller compactor suitable for compacting gravel roads, a Vacuum brush to collect leaves, a Leaf blower, an Edge trimmer for cutting lawn edges, a Stump grinder and a Wood chipper for chipping branches.

At customer Svenstorp’s estate, JTF carries out the booked work and gives a viewing for the property owner to illustrate what additional services they might need.

Fredrik especially likes the new Rotary hedge cutter. “We think this new attachment is fantastic. The Rotary hedge cutter mulches the material during cutting, which means that there is no need for direct collection afterwards. All we must do is blow off the material with the Leaf blower to make it look good.”

“Avant’s biggest advantage is the wide range of attachments that are well-proven and easy to use.”

*Fredrik Thulin*

Fredrik has been very pleased with the service of the local Avant dealer, Nordfarm.

“Their support has been absolutely fantastic. It creates a sense of security to know that there is a reliable contact if any problems arise.” ●





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# New Avant 635i and 640i

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