

AVANT[®] MAGAZINE

AVANT TECNO CUSTOMER MAGAZINE 2019

New Avant 800 series

Full electric e-series in action p. 14-17

New joystick operated lift Leguan 135 Neo p. 18



AVANT ORIGINAL PARTS

LED lights

LED work light

- On ROPS frame
- Product no 66068

LED work light

- On front cover
- Can replace the original halogen light
- Product no 66266



LED work light kit

- 2 front, 1 rear
- Includes all necessary fitting parts
- 700 lumens
- Product no A33916

Telescopic boom service kit

- Compatibility: R series, 400 series, 500 series starting from 2008, 600 series, 745 and 750 until the year 2011
- Includes all the pivot pins, bearing and slide pieces needed for the service of the boom
- Product no A419462 A422891 – 700 series from sn xxxxx1113 ->



Weather covers

- | | Product no |
|----------------------------------|------------|
| • Weather cover for 200 series | 65435 |
| • Weather cover for 419-760i | 65436 |
| • Transport cover for 200 series | 65477 |
| • Transport cover for 419-640 | 65478 |
| • Transport cover for 700 series | 65479 |



For more details, contact your dealer!

Editorial

A strong start to 2019

The year started strong for Avant when we introduced the new 800 series to the international press in February. It is the biggest loader we have ever manufactured, and it created a lot of interest. There was some debate during the press conference around the 800 series; is it a compact loader, from which Avant is well known or in fact a loader? Be it potāto or potāto, we see it as a multifunctional loader and that really is the core of Avant. All of the 200 different attachments we have in our catalogue principally still fit the 800 series. With the 800 series Avant takes, in any case, step into a new dimension: it lifts more, it lifts higher and it is more efficient. The big thing though is that it does all that while remaining still compact enough for most job sites and it is transportable with a 3500kg car trailer.

The electrical revolution has started at Avant with two models, e5 and e6. In this issue of Avant Magazine, you can read about a few of our customers who have opted to go fully electric with their loader. Right now you can read about many manufacturers showing prototypes of electric models; especially many electric excavator and loader projects are now being revealed. This is definitely the direction the world is moving towards and there are several reasons for it. It is very exciting that Avant is at the front of this development with the Li-Ion batteries e6 model. We are now in the best possible position and it is our ambition to stay in the lead of this development.

At the moment we are working hard to increase the production in our Ylöjärvi plant where all Avant loaders are produced. Demand is strong and last year, Avant grew by 17%. This year we expect a similar growth, which demands sizeable investments to our production machinery and facilities, which you can also read in this issue of Avant magazine.

So the strong start to 2019 is here. Now we will concentrate on finishing it off well.

*Jani Käkelä
Executive Vice President
Sales & Marketing
Avant Tecno Oy*

Avant Tecno Customer Magazine 2019

Editor-in-chief: Ella Huilla / Avant Tecno Oy

Publisher: Avant Tecno Oy

Layout: Tulus Oy

Print: Offset Ulonen Oy, Tampere

Edition: 6000

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New

AVANT[®] 800





Biggest and strongest



AVANT 800	850	860i
Length	3,4 m	3,4 m
Width	1,5 m	1,5 m
Height	2,2 m	2,2 m
Weight	2480 kg	2540 kg
Lift capacity	1900 kg	1900 kg
Lift height	3,5 m	3,5 m
Speed	24 km/h	30 km/h
Aux. hydraulics oil flow/pressure	70 l/min	80 l/min
Motor type	Kubota V2403 Stage 3B	Kohler KDI 1903 TCR Stage V

The all-new Avant 800 series is the largest and most powerful loader series manufactured by Avant Tecno to date. Two models – Avant 860i and Avant 850 – will be introduced at the bauma 2019 trade fair in Munich this April.



With its 1900 kg lift capacity and 3.5 m lift height (half a metre longer than the Avant 700 series), the new Avant 800 series definitely stands out among compact loaders. As with other Avant loaders, the 800 series comes equipped with hydrostatic transmission with a hydraulic drive motor on each wheel with two drive speed areas. The drive speed of the 800 series maxes out at 30 km/h.

Familiar Avant features

The 800 series comes with the Avant quick attach system, giving users the flexibility to choose among the over 200 attachments available from Avant’s comprehensive attachment range. The hydraulic hoses on the attachments are coupled with a multi-connector, allowing installation with a single hand movement.

The Avant quick attach system – other systems such as the



AVANT[®] 800

Euro 3 will be available as an option – makes the 800 series one of the most versatile on the market, usable in a wide range of industries including construction, landscaping, property maintenance, agriculture, among others.

And while the 800 series, which weighs in at 2 500 kg, is impressive because of its power, its dimensions – L 3.4 m x W 1.5 m x H 2.2 m – and articulated design offer the same smooth mobility that users expect from an Avant.

Another standard feature of the 800 series is the telescopic boom, which extends and retracts hydraulically 825 mm. The boom has a maximum lift height of 3.5 m to the hinge pin, making loading trucks with high sides or mixer feeder wagons and unloading from high up fairly easy. The machine's hydraulic self-levelling system keeps the load automatically level when lifting or lowering the boom.

A certified ROPS/FOPS open cab comes standard on the 800 series, although users can opt for an enclosed heated cab as well. The DLX cab mounts on the chassis of the loader with anti-vibration mounts, keeping noise and vibration to a minimum. Users will also appreciate the efficient heating and ventilation

along with the large windows.

For the present two models from the 800 series, both diesel-powered, will be released. The Avant 860i will be EU Stage V and US Tier 4 final compliant while the Avant 850 will be available in markets not covered by EU Stage V and US Tier 4 final emission standards. Production of the Avant 800 series will start in the fall.

In February fifty-eight journalists from 14 countries journeyed to Ylöjärvi to take part in the biggest press conference held by Avant Tecno to unveil the 800-series.

See you at bauma 2019

The Avant 800 series will be presented to the public at the bauma 2019 trade fair in Munich, Germany from the 8th to the 14th of April. The world's largest trade fair for the construction industry, bauma is held every three years at the Neue Messe München.

The last time bauma was held in 2016, 3 425 exhibitors from 58 countries participated. Over the seven days the trade fair was open, bauma welcomed 583 736 visitors from 219 countries. About 1500 journalists and media representatives from 47 countries were on hand to cover the event.



NEW ATTACHMENTS

Root grapple

The root grapple is widely used in the forestry industry, but it works wherever different types of debris need to be handled. It is equipped with the same grapples as the demolition grapple buckets, but the bottom part is made of strong steel bars, making it easy to:

- grab and handle branches, tree trunks, rocks or other types of debris.
- tear roots from the ground
- keep machinery cleaner when handling logs, branches, and other materials, as soil and similar small debris fall out between the bars

The root grapple is available in two models: a 1300 mm model with two hydraulically operated grapples, and a narrower 1000 mm model with one grapple. The hydraulic cylinders and hoses of the grapples are well protected with metal covers.



- Versatile attachment for handling timber and various types of debris
- Strong tines make it possible to tear roots from the ground

	1000	1300
Width	1000 mm	1300 mm
Number of grapples	1	2
Weight	130 kg	200 kg
Product no.	A429058	A37537

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
1000																											
1300																											

Rotary hoe series 2

The rotary hoe is the right attachment for cultivating soil, finishing seed beds and rotovating. It features direct drive with the hydraulic motor mounted directly on the milling shaft. The curved blades guarantee efficient milling of the soil. A vertical grading rake with strong tines in front of the blades traps stones and debris, effectively allowing them to be buried in soil. This gives a finished seeding bed in a single pass. There is also an adjustable soil scraper blade between the milling shaft and the field roller. The working depth up to 150 mm is steplessly adjustable with the rear field roller.

- Comes in two models
- Efficient rotary hoe for soil cultivating, two models
- Direct drive with hydraulic motor mounted directly on the milling shaft
- Vertical grading rake with strong tines in front of the blades which traps stones and debris
- Working depth steplessly adjustable with the rear field roller
- Adjustable soil scraper blade between the milling shaft and the field roller



	1200	1500
Working width	1200 mm	1500 mm
Roller width	1400 mm	1700 mm
Total width	1530 mm	1830 mm
Length	1140 mm	1140 mm
Height	550 mm	550 mm
Working depth	0-150 mm	0-150 mm
Weight	250 kg	285 kg
Product no.	A425119	A37430

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6
1200																										
1500																										

Leveller HD



Working width	1600 mm
Total width	1630 mm
Length	1050 mm
Height	465 mm
Working depth	100 mm max.
Product no.	A427450

The leveller HD is an efficient tool for levelling uneven ground, mulch, yards, driveways, etc. It features:

- Bucket cutting edge on the front and on the rear, allows breaking and cutting of the ground
- Straight vertical levelling edge on the rear
- Grate on the front for picking up stones
- Two hook type brackets on the front, for transporting a bucket, among others
- Scarifier bar in the rear, equipped with hooks, can be turned manually up to five (5) different working depths, and can be lifted so that the leveller works without scarifying the ground

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A427450																											

Silage dispenser

The robust dispenser bucket is equipped with a hydraulically-driven elevator on the bottom. It discharges to both the right and left side. It is especially recommended for precision chopped silage and feedstuff made with feeder mixers. Adjustable side hatches allow controlled distribution of looser materials like crushed grain as well. The dispenser bucket is equipped with a straight edge and can be filled like a normal bucket directly from floor level. Each fill is enough to feed 10 cows, taking about 10 minutes to distribute silage to 50 cows. The manual side hatch adjustment is a standard feature, while the hydraulic side hatch operation is available as an option.

- Quick and easy way to distribute silage
- Silage can be distributed on the left or the right side
- Can be tilted down to ground level and filled like a normal bucket
- Manual side hatch adjustment as standard, hydraulic side hatch operation available as an option

Bucket width	1100 mm
Total width	1360 mm
Volume	650 l
Weight	328 kg
Product no.	A424013

Option:

- Hydraulic side hatch operation A429734



Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6
A424013																										

Very compatible
 Compatible
 Incompatible

NEW ATTACHMENTS

Flail mower with S30 hydraulic side arm

The hydraulic side arm with the S30 quick attach system can be fitted with attachments equipped with the S30 bracket, such as the 1200 mm flail mower. It allows mowing on the right side of the loader. The side arm is equipped with a straight telescopic arm and a tilting jib arm, which allows easy mowing of road banks as well as gradients.

The telescopic arm extends hydraulically up to a maximum of 1.0 m to the side, which means that the 1200 mm flail mower's reach from the centre of the loader is up to 2.9 m. The jib arm moves up to a maximum of 45° down and 90° up from the horizontal position. The speed of the telescope and jib arm movement is adjustable. The jib arm hydraulically floats upwards, but not downwards. The side arm is equipped with a hydraulic release mechanism, and the hydraulic release pressure can be adjusted and measured. The attachment mounted on the side arm will give in backwards when it hits an obstacle. The side arm will return to the normal position as soon as the attachment is tilted downwards.

When using the 1200 mm flail mower, the Avant 180 kg side weight kit needs to be attached to the other end of the side arm to keep the unit balanced.

To operate the flail mower, the loader must be equipped with the attachment control switch pack which is sold separately.

The 1200 mm flail mower with S30 quick attach bracket mounts only on the S30 hydraulic side arm. It cannot be mounted on the attachment coupling plate of the loader. Other flail mower models (A36730, A36015) cannot be mounted on the hydraulic side arm.

- Easy mowing of road banks and gradients with the flail mower
- Total reach (side) of up to 2.9 m
- Equipped with high flow hydraulic motor
- S30 quick attach system

Product no.	A37213
Max. reach (side)	2900 mm
Working width	1200 mm
Height	722 mm
Weight	680 kg (incl. 180 kg side weights A49063)

Flail mower with hydraulic side arm (Product no. A37213) includes:

- Flail mower 1200, S30 quick attach system A37505
- Hydraulic side arm, S30 quick attach system A424552
- Side weight kit 180 kg, mounts on the side arm A49063

Required:

- Attachment control switch pack



Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A37213															*		*	*									

Very compatible
 Compatible
 Incompatible
 *) with Stage V -diesel engine

S30 hydraulic side arm

The hydraulic side arm with the S30 quick attach system can be used with attachments equipped with the corresponding S30 quick attach bracket. The side arm is equipped with a straight telescopic arm and a tilting jib arm. The telescopic arm hydraulically extends up to 1.0 m to the side, and the jib arm moves up to a maximum of 45° down and 90° up from horizontal position.

The side arm is equipped with a hydraulic release mechanism, and the hydraulic release pressure can be adjusted and measured. The attachment mounted on the side arm will give in backwards when it hits an obstacle. The side arm will return to the normal position as soon

as the attachment is tilted downwards. The Avant 180 kg side weight kit is available as an option. It is necessary for using heavier attachments like the S30 flail mower 1200 mm.

- The attachment's hydraulic hoses are connected to the side arm with flat face quick couplers.
- Telescope and jib arm movement speeds are adjustable.
- The jib arm floats hydraulically upwards, but not downwards. If the loader encounters an obstacle while in operation, the attachment mounted on the arm (the flail mower for example) will remain in the position it was in.

Product no.	A424552
Weight	250 kg
Max attachment weight	500 kg
Telescoping to the side	max. 1000 mm
Max width	1870-2580 mm
Jib arm movement	135° (45° down and 90° up from horizontal position)

Option:

- 180 kg side weight kit A49063

The attachment control switch pack is required on the loader for operating the side arm & the attachment. The control switch pack is sold separately.

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A424552																											

S30 mechanical side arm

The mechanical side arm with the S30 quick attach system can be fitted with lighter (max. 200 kg) attachments like the S30 cutting bar and the S30 multi-function drive unit with HD brushes. It is equipped with a mechanical, manually extendable straight telescopic arm and a hydraulic jib arm which tilts the attachment up and down. It is possible to telescope to the side up to a maximum of 1000 mm and jib arm movement is up to a maximum of 45° down and 90° up from the horizontal position.

The side arm is pivoted in the middle, locked with a pin, and can be turned manually up and down in 45° steps – even up to 180° to the other side – making it possible to work on either side of the loader. The arm is rigid and there is no release mechanism in case it hits an obstacle.

The attachment control switch pack (sold separately) is needed to operate the side arm. The hydraulic jib arm is operated with the switch pack and the attachment mounted on the side arm is with either the auxiliary hydraulics control lever or with the optional joystick. If the attachment is not in operation or if there is no attachment on the side arm, the jib arm can be operated with the auxiliary hydraulics control lever.

- Versatile side arm, can be fitted with hedge cutter bar, weed brushes and other attachments.
- Equipped with a mechanical, manually extendable straight telescopic arm and a hydraulic jib arm
- Telescoping to the side up to a maximum of 1000 mm, jib boom movement max 45° down and 90° up from horizontal position
- Can be turned manually up and down in 45° steps, even up to 180° to the other side

Works with:

- S30 cutting bar A430938
- S30 multi-function drive unit with HD brushes A429926

Required:

Attachment control switch pack

Product no.	A431070
Weight	130 kg
Max attachment weight	200 kg
Telescoping to the side	max. 1000 mm
Max width	1645 mm
Jib arm movement	135° (45° down and 90° up from horizontal position)

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A431070																											

NEW ATTACHMENTS

Attachments for S30 side arms

S30 Flail mower

The 1200 mm flail mower with S30 quick attach bracket mounts only on the hydraulic side arm. It cannot be mounted on the attachment coupling plate of the loader or on the S30 mechanical side arm. Other flail mower models (A36730, A36015) cannot be mounted on the hydraulic side arm.

The S30 mower has the same 1200 mm mower deck with hammer flails as the flail mower (A36730), but it is equipped with the high flow hydraulic motor of the 1500 mm flail mower. This adds 25% efficiency/working width ratio compared with the 1500 mm flail mower, and 100% more than on the standard 1200 mm flail mower (A36730).

Product no.	Weight	Working width	Max. width
A37505	250 kg	1200 mm	1580 mm

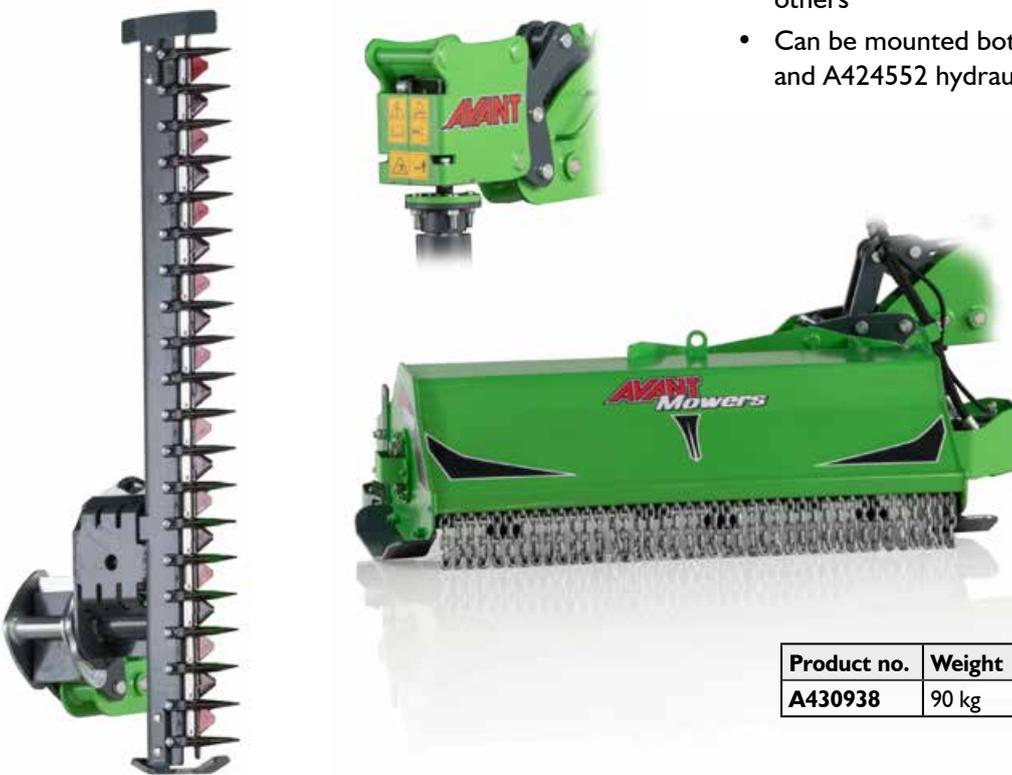
S30 Cutting bar

The S30 cutting bar mounts on both the mechanical and hydraulic side arm with the S30 quick attach system. It cannot be mounted on the attachment coupling plate of the loader. S30 cutting bar is equipped with the same cutting blades and blade guides as the cutting bar (A35676). The frame and actuator mechanism are stronger, optimising the S30 cutting bar for hedge cutting and not for cutting hay because of its higher frame. There are wear plates at each end of the cutting bar, which are useful when working on paved and asphalt surfaces, for example.

The mounting bracket of the cutting bar is pivoted and locked with a bolt. It can be turned manually to different positions, making it possible to, for instance, cut a hedge horizontally and vertically in different angles. The cutting bar is also equipped with a pressure relief valve which protects the unit if it hits an obstacle.

- Strong cutting bar for cutting hedges, bushes, among others
- Can be mounted both on the A431070 mechanical and A424552 hydraulic side arm

- Same cutting blades and blade guides as on the A35676 Cutting bar
- Pressure relief valve protects the cutting bar in case of contact with an obstacle
- Wear plates at each end, e.g. for working on paved and asphalt surfaces



Product no.	Weight	Working width	Total width
A430938	90 kg	1500 mm	1600 mm

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6
A430938																										

Very compatible
 Compatible
 Incompatible

Multi-function drive unit S30

The multi-function drive unit equipped with the S30 quick attach bracket is intended mainly for rotating different types of brushes: XL weed brush, XL wire rope brush and carousel broom. It can be mounted in the horizontal or vertical position on the side arms with S30 quick attach system (both mechanical and hydraulic arm), but not on the attachment coupling plate of the loader. The S30 drive unit has the same 57 mm square shaft for attachments as the A37190 Multi-function drive unit, but is equipped with a lower torque and higher speed hydraulic motor and works therefore better with brushes. It doesn't have enough power to rotate auger drills or screw cone log splitter.

- Drive unit which mounts on S30 side arms
- Possible to mount in the horizontal or vertical position
- Equipped with high speed hydraulic motor, intended for rotating different types of brushes
- Same 57 mm square shaft for attachments as on the A37190 Multi-function drive unit

Works with:

Carousel broom A37317

- Same Ø 1000 mm replaceable brush as on A2971 Carousel broom, part no. A32698
- Weight 67 kg
- Can also be mounted on the A37323 Angle adapter 90° to sweep on the left side of the loader

Carousel broom, steel A433646

- Ø 1000 mm brush with steel bristles
- Weight 67 kg

XL weed brush A429932

- Efficient weed remover, can be mounted both on the normal and on the S30 drive unit

- Consists of 3 pcs Ø 600 mm steel brushes mounted together
- Max. diameter 1240 mm
- Height 375 mm
- Weight 64 kg

XL wire rope brush A431157

- Equipped with 32 pcs heavy duty wire rope bundles,
- Can be mounted both on the normal and on the S30 drive unit
- Max. diameter 990 mm
- Height 370 mm
- Weight 36 kg

Product no.	Torque	Rotating speed	Weight
A429926	950 Nm @ 200 bar	95 rpm @ 30 l/min	30 kg

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A429926																											

Attachment rotator

The attachment rotator makes it possible to rotate the attachment 360° continuously and infinitely in both directions. This is useful in many jobs, for instance when emptying boxes which need to be turned upside down.

Like the tilt adapters, the rotator mounts between the attachment and the loader's attachment coupling plate. It is equipped with a hydraulic motor and a slewing ring which allows the 360° rotation. Its load capacity is 1200 kg. When mounted on the rotator, the attachment is 195 mm further away from the loader's attachment coupling plate.

- Hydraulic rotator makes it possible to empty boxes by turning them upside down, lifting of pallets on uneven ground, turning the attachment 360° etc.
- Mounts between the attachment and the quick attach plate of the loader



Rotation	360° continuous
Rated max load	1200 kg
Weight	96 kg
Product no.	A424406

Model	220	225	225LPG	313S	320S	320S+	420	423	520	523	528	530	R20	R28	R35	630	635	640	745	750	755i	760i	850	860i	e5	e6	
A424406																											



AVANT e6 impresses – both on paper and on the job

Three Finnish customers were among the first to put the new Avant e6 loader to the test. While its features are convincing on paper, does the Avant e6 measure up on the field?

Avant e6 has all the familiar and reliable features typical of Avant loaders, making it just as versatile and easy to use. It has the same design with rigid articulation joint as well as the quick attach system for Avant's wide range of attachments. The exceptional features of a battery-powered loader – zero-emission, very low noise and cost-effectiveness – make the electric e6 especially interesting.

An incredibly efficient machine

Tampereen Porausteam tested a prototype of the Avant e6 on their work sites. When the e6 arrived, a list of work sites were waiting and it was put to work immediately. "We decided to

Photo: Avantpalvelu



buy our own machine as soon as we had tested the prototype. The machine made a big impression right from the start," says **Sakari Haapaniemi**, CEO of Tampereen Porausteam.

The e6 has been at work on two bigger sites after it was delivered in September 2018. "We have transported the e6 between these sites and it has been in operation every day. We haven't had any problems. The best features in an electric loader are the low noise and incredible power – an electric motor doesn't get tired."

The Avant e6 has also been incredibly efficient. "We've gotten so much done with the e6 that we thought we've been driving it continuously. We were surprised to realise that it had only 50 hours in its clock," Haapaniemi recalls.

On one of the sites, the team has to demolish concrete silos inside a factory in operation. This differs from many demolition jobs because there is ample space for moving the machines about. On the other hand, this sets strict limits for emissions and noise. "We of course also have a lot of work sites where combustion engines are allowed. But zero-emission engines are becoming a more and more important thing in many jobs."

A vibrant rental market

Finnish rental company Avantpalvelu bought a new Avant e6 right after its launch. "We are very confident that a battery-powered loader has a place on the rental market. Customers today are well aware of emission problems and those who rent the e6 certainly know what they are looking for." Avantpalvelu's CEO **Juha Väyliö** explains. Their Avant e6 has been in use at several demolition sites and horse stables in its first few months.

The e6 has collected over 200 working hours in just a couple of months. "The electric loader has been well received on the rental market, better than we expected in fact," says Väyliö, adding that they are very likely to add more electric Avants in their rental fleet. "We are currently almost too busy with the e6, as the machine should be on two different work sites at the moment."

Väyliö says that an electric loader has many good features. Apart from zero emission and very low noise, he emphasises the absolute reliability of the machine. Battery-powered engines are still new on the market, leading some rental customers to ask questions. "Electric machines and advanced battery technology are still relatively new, and you can hear that from people's comments. But it is a good thing that with Avant e6, even the biggest doubts are easily wiped away." Väyliö mentions that while many customers are doubtful about the capabilities of the e6 when they rent it, they cannot praise the e6 enough when they return it.



Photo: APPH-Yhtymä



Photo: Tampereen Poraussteam

The e6 can be rented for about the same price as the largest Avant 700 series, making it slightly pricier to rent than a similar sized machine with a diesel engine. Pricier that is, until one considers the benefits of driving an Avant e6.

APPH-Yhtymä orders their second Avant e6

APPH-Yhtymä today has five Avants. One of them is the new lithium-ion battery powered Avant e6. **Pertti Hyytinen**, CEO of APPH-Yhtymä, smiles when he tells about his company’s long relationship with Avant. “I think it was in 1998 when we bought our first Avant. It was the earlier articulated 500 series with the chain and sprocket transmission. In twenty years, we have had over 30 machines and a countless number of attachments. We have been hoping for an electric loader for a long time and fortunately it is in our fleet now.”

APPH-Yhtymä is currently working on a new hospital construction project in north-eastern Finland and is responsible for

on-site logistics. The Avant e6 was brought there right after it was delivered from the factory. “This construction site follows the strictest cleanliness regulations making an electric loader the only option. On this site we take care of the logistics outdoors as well as all transport and lifting operations indoors,” Hyytinen says.

“We acquired the e6 as soon as it came on the market because we have to work indoors. Health and environmental reasons were the main factors in our buying decision. The tightening emission regulations also played a role of course.”

APPH-Yhtymä just ordered their second Avant e6. “We have been very satisfied with the electric Avant and will now change one of our LPG engine machines to the e6. I strongly believe that, at least in our company, battery powered loaders will completely replace machinery with LPG engines in the future. We work a lot indoors and among people, that’s why zero-emission is an important health factor.”



“With the supercharger, the machine is fully charged after lunch”

For Peter Ståhl and his colleagues at Merck, the switch from a forklift to an electric Avant e6 has been very positive. Ståhl has found the Avant e6 to be an all-round machine with zero emission that's good for the workplace and the environment.

One of the options being considered for a new machine was a diesel-driven one, but the electric-powered Avant e6 emerged as the final choice. It's a decision that Peter and his colleagues have not regretted as they all think the e6 is an all-round machine that suits their business.

At Merck, where the products are solvents and fine chemicals for research and industry, loading and unloading takes place mainly outdoors where the ground can be uneven and slippery. Ståhl considers the Avant e6 a good choice as an easy-to-handle smaller wheel loader.

The Avant e6 is also used at Merck for, among other things, plowing the snow on the grounds. Ståhl thinks it does the work really well. “The e6 has a good snow plow attachment. We have used Avant e6 when it is slippery; we feel safe and never worry when it is snowing,” Peter explains.

When it comes to battery life, Peter and his four colleagues who also run the e6 have no problems with downtime during the working day. “We need to drive about 1-2 hours and never have to recharge during the day; we do that at night when the machine is in the garage. The e6 is easy to charge,” Ståhl points out.

The team also has a super charger for the machine. They have not needed to use it yet, but think it will be useful. “With the supercharger, the machine is fully charged after lunch,” Ståhl says.

The current Avant e6 does not have an enclosed cabin and it is something that Ståhl would like to see in the future to protect from the weather. “The whole cabin would not need to be heated up. Just a small fan to get rid of condensation would make me happy.”

Avant builds flood defense model in Rhine Valley



A number of groups are working together to develop “Rhesi” (Rhein, Erholung und Sicherheit), a flood defense project in the Rhine Valley between Austria and Switzerland.



Watch accelerated video of the construction work at <https://youtu.be/LHqY-oLZclk>

The Rhine is a living river, and the Alpine Rhine Valley is an important habitat for wildlife. Numerous institutions are working towards ensuring the sustainable development of the Rhine Valley as a habitat and an economic region with a future. Project Rhesi is being planned and implemented by **the International Rhine Regulation (IRR)**.

In order to provide residents with the best flood protection, a model hydraulic engineering project for future flood defenses is being constructed in Austria’s Dornbirn Rhine region.

The Rhesi flood defense project moved into the “approval” planning stage in autumn 2018. Hydraulic engineering trials on models are key components of this project stage, and an Avant was purchased to construct the 100-metre length Rhesi model at 1:50 scale.

Because the model will be constructed in a former industrial warehouse, a battery-operated Avant e6 was chosen. The choice was made partly because of the restrictions on the floor’s load-bearing capacity, but also to ensure clean air in the enclosed space. Other major advantages boasted by the Avant e6 are its long service life and extreme maneuverability.

The e6’s huge lifting capacity was a major advantage when building the model system, effortlessly transporting pallets full of bricks to their destinations. With the swivel function, the Avant e6 can transport material to its precise destination — even in very tight spaces.

For the model to operate properly, the collection basins (where sand builds up) must be emptied several times a day. This task is made considerably easier using the appropriate attachment, such as a pallet fork or a light material bucket.



LEGUAN 135

– the new, easy-to-use, joystick operated lift from Leguan



Leguan Lifts will release a new platform – the Leguan 135 Neo, Leguan’s most user-friendly platform to date. All key operations are controlled with a single joystick, which allows multiple boom operations to be handled simultaneously.

The 135 Neo is equipped with both automatic and manual outrigger levelling. The automatic levelling is made simple, since all this operation requires is a single push of a button. The automatic levelling function works seamlessly on sloped surfaces as well.

Leguan’s in-house designed automatic outreach control system measures the cage load and sets the maximum

outreach accordingly.

Restoring the booms to transit position has been made even easier: simply hold a single switch and the booms automatically go back to transit position. The software, which was developed in-house, ensures that the work cage and booms do not collide with any other part of the machine.

While the 135 Neo has been made lower and narrower than its predecessors, there have been no compromises made on the top-class off-road capabilities Leguans are known for. Simplicity and service-friendliness were two key aspects in the development of this machine.

The machine is powered by a Honda GX390 petrol engine, which comes equipped with automatic revolution control. The 135 Neo can use the 4WD or tracks, which come as an option, interchangeably. As with all Leguan models, it is possible to order the 135 Neo with a tailored trailer, atop which it can be operated.

Electric motor (230 V or 110 V), as well as remote operation for driving and outrigger operations are available as an option.

With growing interest toward greener machines, a battery-operated Leguan 135 Neo will be made available in 2019.

Main technical features of the LEGUAN 135 Neo

- Max. working height: 13.5 m
- Max. work cage load: 250 kg
- Max. side outreaches: 140 kg/7.5 m, 250 kg/7.0 m
- Transport length: 4550 mm
- Transport height: 1930 mm
- Transport width: 890 mm (without work cage), 1330 mm (with work cage)
- Own weight: 1630 kg
- Max. drive speed: 2,4 km/h

Neo



Production fuels Avant

An essential part of Avant Tecno's strategy has always been manufacturing – making the loaders in our own factory from start to finish. This basic line was already formed during the early years of the company.

Through strong growth and development, it has gained more distinctive features as the core of our operations. This naturally involves committed factory workers, of whom we have over 200 nowadays. The financial year 2018 was the first time in the almost 30-year Avant Tecno history when the annual revenue topped €100M.

One of the reasons for Avant Tecno's strong showing in the last decade can be traced back to a simple idea: Know your customers

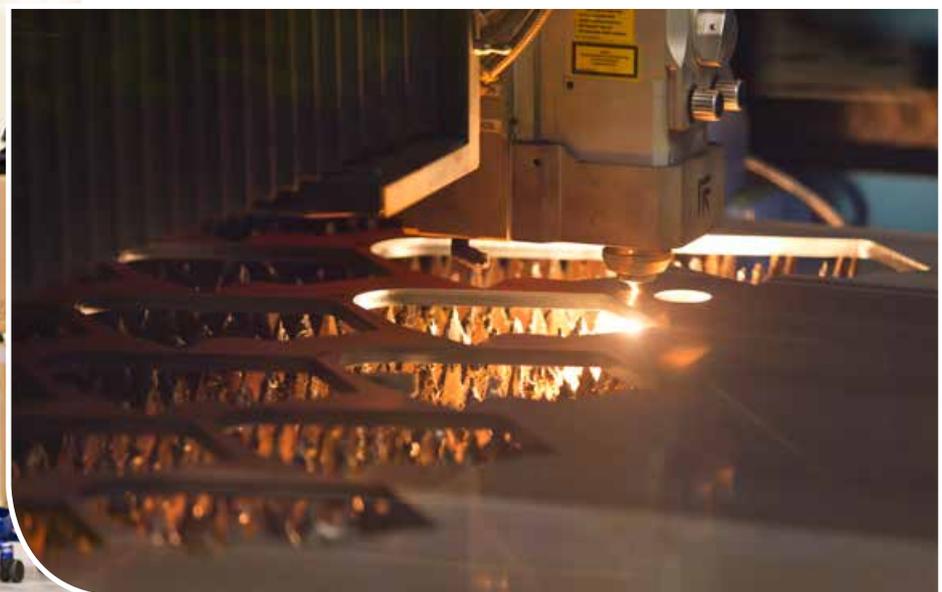


Tecno's growth

and their needs. Following this rule has helped Avant Tecno become the world leader in manufacturing compact loaders and accessories. "Customer needs are the basis for our R&D. This way we can develop products that have real demand on the market. While we have reached our targets well, we must keep our finger on the pulse about our products, production, and our operation as a whole," **Jani Käkeli**, Avant Tecno's Sales Director explains. The customer-centred strategy has contributed to the

company's expansion. Once just a small company in Ylöjärvi, a municipality adjacent to the city of Tampere, the Avant Tecno Group now includes three subsidiary companies and access platform manufacturer Leguan Lifts Oy. The group posted a total revenue of €123.5M, with Avant accounting for €110.5M, a 17 percent increase from the previous year.

Eighty percent of Avant Tecno's production is exported. Avant is counting on achieving an annual growth rate of 10 percent in





the future, with bigger growth projected in the US and moderate growth in Europe.

We have always strived to develop our operations and invest in our needs. About five years ago we expanded our manufacturing premises by purchasing a 44 000 sqm factory area on the neighbouring plot. “We were in a situation where we would have had to expand our premises in any case. For some of our operations, the facilities were just becoming too small. The property acquisition enables us to move our operations into new facilities quickly, providing us much-needed space for our production. It also ensures our growth potential for the foreseeable future,” says Jani Käkelä.

Making smart investments

The production path of Avant is as interesting as that of the whole company. We have achieved a level of producing one loader per hour, in two shifts. The change has been enormous, and it has required much commitment. We have always had a well-defined product range to support our production, providing guidelines for the improvement of our operations. In the last three years, around 10 000 sq m of the new assembly and dispatch areas have been taken into use.

During the last six years, as the production rate has gone up by 30 percent, Avant’s workforce needed reinforcement. New hires boosted personnel numbers



by 10 percent. *Saku Vastamäki*, Avant's Vice-President for Production says that the company intends to invest €10M to further increase production. "Our target is to increase weekly production by about 50 percent from current figures. In practice, this means a gradual rise from 100 loaders/week to 150 loaders/week."

To think that in the early days, the Avant production line produced just one loader per day!

Raising production means ensuring that the machinery is in top condition. One of the three machines in the laser cutting line will be replaced with a new fibre laser cutting machine in the fall of 2019. The capacity of the sheet bending production cells will be increased in February 2019, when the new automatic bending machine is taken into use.

Automation plays a big role in the manufacture of Avant compact loaders. As early as 2007, the steel chassis of the loaders have been welded by robots. Two new robots will be installed this year, bringing the automatic robot welding stations to a total of ten. Since last summer, a new automated powder coating line has been running.

Proudly made in Finland

The LEAN spirit drives these developments in Avant's production. The goal of continuous process improvement is supported by the concepts offered by Kanban, Kaizen, and 5S. Adopting these practices have helped improve the flow of materials, thus increasing efficiency, through layout changes.

Within the next two years, the investment plan will continue to be implemented. Next on the to-do list: automatization of chassis parts machining, assembly line pacing and a more automated solution for in-house logistics. All current development projects are set to be completed by 2021.

"With these resources, we are confident about the future. Avant is currently the global market leader in its class and our objective is to keep that position. We are proud to say that all manufacturing is 'Made in Finland', from the beginning until now and into the future. That is what we want and are striving for, naturally," concludes Vastamäki.



Avant invests in larger warehouse as spare part sales increase

Avant's comprehensive growth is also strongly reflected in spare parts sales, which have grown strongly in recent years. As the spare parts sales grows, more space is needed to store them; and at the moment, Avant's spare parts warehouse is undergoing big changes.

Avant's spare parts department is on the go from morning on, when the team start their working day. In the background, the latest tunes play, giving rhythm to their work. Wherever in the world the order comes from, spare parts deliveries are handled here.

In the last financial year, spare parts sales accounted for EUR 6.5 million of Avant's net sales, an increase of 30 per cent on the previous financial year. Recent growth has mainly come from the sale of service parts, i.e., loader parts, such as filters, slide pads and articulated joints.

The sales result indicates that customers have a clear desire to keep their loaders in a good condition. The original parts sold by Avant are also reasonably priced.

A spare part for every model

The Avant range of spare parts is incredibly wide and are available for both new and old machines. Over the years, Avant has produced more than 50,000 loaders, for which they always strive to provide product support.

"Avant's oldest machines are almost thirty years old, and no machine manufactured has been scrapped due to their long lifetime. Acquiring parts for older machines is easy, and because of our wide catalogue, our customers are able to keep their old machines in good working condition," says Avant Customer Support Manager, *Tatujussi Luosmala*.

Adding much needed space

At the moment, the spare parts warehouse is undergoing a major change as part of Avant's investment programme. The expansion project is progressing in stages.

"We are just about to introduce two new warehouse machines in addition to the previous two and the spare parts warehouse has grown from 300 square meters to 600 square meters. In the current year, our warehouse area will grow to 1200 square meters," says Luosmala.

Expanding the stock of spare parts will allow for a larger inventory and further improve product availability. At the moment, there are about 50,000 spare parts in the warehouse, for the 5,000 items on the catalogue.

Around 250,000 spare parts are delivered from here worldwide annually. Spare parts headed to Europe are shipped weekly to importers, together with the attachment and loader deliveries. Parts needed in distant export countries and express orders are delivered via courier, with about 1,500 departures per year.



Everyday work at the Avant spare parts.

6,000 domestic postal deliveries – **1,500** overseas

New warehouse holds **50,000** spare parts
– **5,000** items on the catalogue



Avant's aftersales & spare parts team is happy to help all Avant owners around the world.

Right: New warehouse machine in action.

In addition to normal freight deliveries, domestic spare parts deliveries, just over 6,000 orders are handled by the postal service. Several customers also buy spare parts directly from the factory.

AVANT[®]
Original Parts





Avant Tecno UK Ltd turns 20

Avant Tecno UK Ltd will be celebrating 20 years of UK trading success with a tour of the country.

Travelling from Avant South East Hire (Essex) to Angus Chainsaws (Scotland) from April 2019 to Sept 2019, the first Avant roadshow 'On Tour' lorry and exhibition van will showcase new and exciting products.

The UK Tour will of course visit all leading Avant UK dealerships, providing an opportunity for Avant owners old and new to meet the team and take a closer look at the featured machinery and attachments.

As a special thank you to their loyal UK customer base, there will be exclusive offers available only during the roadshow.

"There is much excitement at Avant and among dealers for the roadshow. The company and the brand has moved from strength to strength. This tour is a huge thank you to our dealers and customers for a wonderful 20 years! We are looking forward to the next 20 and beyond," **Raimo Ala-Korpi**, MD for Avant Tecno UK Ltd, says.

John Spencer, Avant National Sales Manager, adds, "This tour will give us at Avant a chance to meet directly with our customers, gaining invaluable feedback on the equipment. In the process, we'll develop our products even more. It will also give us a chance reach out to those that haven't yet taken the plunge and realised the potential of our fantastic multi-use machines."





AVANT[®]

VERSATILE

ATTACHMENTS

TO ALL

SEASONS

CHOOSE YOURS FROM OVER
200 DIFFERENT ATTACHMENTS

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AVANT® 800



**MO
RE
SAME VERSATILITY**

- LIFT CAPACITY
- LIFT HEIGHT
- REACH

1900 kg

3.5 m

30 km/h

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