

Valtra Team

CUSTOMER MAGAZINE 2 2013

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**Less emissions,
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EDITORIAL



The harvest is at full speed at the moment, the crops look good and the prices for our products are also generally looking good. This is a positive development as it looks like farmers are beginning to do well again after some difficult years. This is especially good message for contractors and dealers who are more or less dependent on the agricultural sector. Companies can once again make investments, which is good for continuity over the long term.

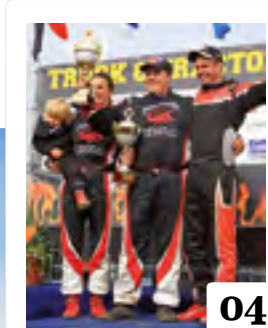
In this issue of Valtra Team you will find interesting articles about innovative entrepreneurs here in the Netherlands who use Valtra tractors in a very special way. Another feature is tractor pulling. Valtra tractors have dominated the Pro Stock category for a number of years already, demonstrating the quality and performance of our engines.

In the meantime, Valtra is preparing for the Agritechnica exhibition in Hannover, which will be held in November. This exhibition has become increasingly important for the Dutch agricultural industry, so a lot of visitors from our country will be expected there. The Valtra stand will feature all four tractor series: the A, N, T and S. Of course, there will also be some surprises that have not yet been revealed, so there is even more reason to pay us a visit. Welcome to the Valtra stand!

Stan Buijsrogge
SALES MANAGER, NETHERLANDS



04 New alternatives is N-series



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AutoGuide 3000 and telemetry – FUSE

Innovation



FUSE

trademark for precision farming technologies

Fuse is the new AGCO trademark for its precision farming technologies. For Valtra the trademark covers the AutoGuide 3000 automated steering assist system and the AgCommand telemetry system, for example. For other AGCO brands, Fuse includes applications for harvesting, planning and storage.

For customers, Fuse means that these technologies work together even better. Since few customers have

tractors, implements, harvesters and grain handling equipment from a single manufacturer, it is important that different systems can communicate using the same language.

With Fuse, AGCO is investing considerably in the development of precision farming technologies and related customer support.

www.valtra.nl



Small A Series tractors are available both with narrow and wider gauge and can have an open cabin, cabin with removable roof or a closed cabin.

A Series expands Six new models in under-100 horsepower class

The Valtra A Series has been expanded with the introduction of new smaller models. These agile three-cylinder tractors are ideal as general purpose farm tractors, as well as for fruit farming and property maintenance, for example. The Valtra model line-up now extends from 50 horsepower to 400 horsepower.

The A Series model line-up now includes Compact and Orchard tractors. The A63 and A73 Compact models are available with or without a cab, while the A53 Compact model and all Orchard models have open cabs. Orchard tractors are as narrow as 1.6 metres, making them ideal for fruit farms, for example.

The smallest model is the A53, which offers 50 horsepower. The A63 model has an intercooled turbo engine that produces 68 horsepower. The biggest

model is the A73, which offers 78 horsepower. All of the tractors come with Valtra's reliable 12+12R transmission with synchronised shuttle and creeper gear. The PTO has two speeds, and the linkage is operated mechanically.

All models are four-wheel-drive. There are two hydraulic blocks. The open cab can be specified with a removable roof. The closed cab version is based on the traditional Valtra A Series cab and offers an ergonomic and optionally air-conditioned workspace that can be accessed easily from either side of the tractor. •

NEW SMALL A SERIES MODELS

	Standard max hp/kW/Nm
A53	50/37/196
A63	68/50/285
A73	78/58/310

1-2-3 FOR VALTRA AT EUROPEAN TRACTOR PULLING CHAMPIONSHIPS

Valtra tractors claimed the top 3 positions at the European Tractor Pulling Championships in Zele, Belgium, on 15 September.

Matti Herlevi driving Caesar was crowned European Champion in the Pro Stock category, while **Jurian Duijn** from the Netherlands took silver with Next Sensation and **Johanna Herlevi** third with Gangnam Style.

This is the fifth time that Valtra tractors have made a clean sweep of the European Championships, although it has been several years since the last time. Matti Herlevi has now won the European Championships six times, while his father **Pekka** has won it four times and sister **Johanna** two times.

NEW ALTERNATIVES IN N-SERIES

Valtra has expanded the N Series with the introduction of new models. The N103.4 brings a four-cylinder alternative to the lower end of the model line-up alongside the N103 model. N103.4 has an AGCO Power 4.4-litre SCR engine offering excellent low-end torque and fuel economy, as well as a front PTO option. Power and torque are practically the same in both three-cylinder and four-cylinder models. The N103.4 is available with a three-step or a five-step HiTech 5 transmission.

The HiTrol turbine clutch, which makes continuous start/stop operations extremely smooth, is now available on the N123, N113, N103.4, N103 and N93.

The selection of Versu and Direct models has been expanded to include lower horsepower models in the N Series with the introduction of the N123V and N123D. The N123 Versu and Direct models can be specified with the same equipment and features as larger N Series tractors.

Read more: valtra.nl



The Hemmings' N91 is on the go year round, clocking up 1,000 hours annually.

From Cornwall to New Zealand Cornish dairy farmer and his daughter overseas choose Valtra

Robert Hemmings and his wife **Elizabeth** farm 250 mostly grass acres in the Cornish hills near St Austell and milk 80 British Frisian and Montbeliarde cows. All progeny is kept on the farm, either as replacement stock or finished as beef. Some stores are brought in depending on the over winter fodder situation; a mixture of wrapped bale and clamped silage and a total of around 100 beasts are finished annually.

The Hemmings cut around 160 acres of first cut silage and 70 acres of second cut.

"The third cut depends on the weather," comments Robert Hemmings wryly.

"In past years we have made some maize into silage, but this year we're trying whole crop."

A few years ago Robert and Elizabeth purchased their first Valtra, a six-cylinder 8050, to handle most of the slurry tanking plus some other work.

"We haul trailers for the contractor when making silage and we haul our

own bales. When that machine reached 12,000 hours we swapped it for a newer used model, one with only 4,000 hours on the clock. Valtra's last well, particularly their engines," Robert confirms.

In 2006 the Hemmings purchased a second Valtra, a four-cylinder N91 with loader that clocks up around 1,000 hours annually.

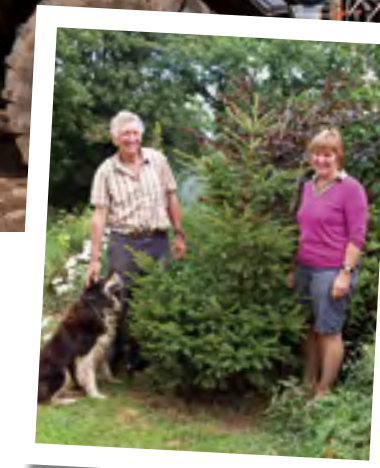
"With the loader it's a handy, compact tractor that is on the go all the time year round," Robert tells us.

Robert and Elizabeth Hemmings' daughter, who lives on a farm in New Zealand, is also loyal to Valtra, although hers comes from Brazil.

Green credentials

Considering the trouble-free history of his own N91, Robert is seriously considering trading it in for a new Valtra N Series, either an N93 or N103.

"There's a natural tendency to up the power a little when tractors are replaced," but Robert questions if that is really necessary.



Robert and Elizabeth Hemmings and their Valtra tree.

Whatever model is chosen there will be a reminder of that N91 in the Hemmings' garden. Seven years ago, to celebrate its green credentials and to promote its Eco models, Valtra gave customers a pine tree seedling with every new tractor.

"This furry twig arrived in the post just after the tractor was delivered," remembers Elizabeth Hemmings.

"I planted it in the garden and we now have a quite presentable six-foot tree."

Valtra has always been proud of its ecological credentials. The factory is located in the middle of a large forest with a wood-fired system that heats the assembly buildings and offices. Excess heat is also piped to the neighbouring village of Suolahti. Ecology is considered seriously when designing and manufacturing tractor components, as is fuel consumption and engine emissions. Valtra was the first company to approve vegetable oil-based fuel for their engines. •

Internet: valtra.nl

Valtra Team

Editor in chief Hannele Kinnunen, Valtra Inc., hannele.kinnunen@agcocorp.com

Editorial Tommi Pitenius, Valtra Inc., tommi.pitenius@agcocorp.com

Editorial Adam Wiatroszak, AGCO Sp. z o.o., adam.wiatroszak@agcocorp.com // Siegfried Aigner, AGCO Austria GmbH, siegfried.aigner@agcocorp.com //

Sylvain Mislanghe, AGCO Distr. SAS, sylvainmislanghe@fr.agcocorp.com // Kim Pedersen, LMB Danmark A/S, kim.pedersen@lmb.dk //

Thomas Lesch, AGCO Deutschland GmbH, thomas.lesch@agcocorp.com // Andrew Rawson, Agco Ltd., andrew.rawson@uk.agcocorp.com

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Valtra is a worldwide brand of AGCO



New style and more power

S SERIES INTRODUCES THE 4G LOOK

The reliable S Series has been updated with a new look, increased power and new features. The S Series is the first tractor to feature Valtra's new 4G look.

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIVE

The driver can select from two driving modes to optimise work productivity and fuel consumption.

The updated S Series is powered by an AGCO Power 8.4-litre engine that complies with the Stage 4 Final emissions standard yet produces up to 400 horsepower and 1,600 Nm of torque with boost. The extra power is available when loading the hydraulics or PTO and when driving fast.

The engine has twin turbos, one of which has an electronically adjustable wastegate. Thanks to the new turbos, the engine offers superb torque at low rpm. At the same time the temperature of the exhaust gases is reduced, which further improves

engine reliability and lowers emissions. The fuel injection pressure has been increased to 2,000 bar, while the cooling power has been increased from 235 to 315 kilowatts. Featuring selective catalytic reduction (SCR) and the Sisu Tronic engine management system, the engine is very fuel efficient. Exhaust gas recirculation (EGR) is also utilised to ensure compliance with the Stage 4 Final emissions standard, but the AGCO Power solution does not require additional particulate filters. The emissions are cleaned by a combination of urea and catalytic converters, so the system is maintenance free.



Market-leading engine and transmission

The new S Series combines market-leading transmission and engine technology that are designed to take on the toughest tasks. The stepless AGCO variable transmission (AVT) is very reliable and is controlled ergonomically from the Valtra ARM driver's armrest. The driver can select from two driving modes to optimise work productivity and fuel consumption. The linkages are integrated with the frame and can carry 12 tonnes of implements at the rear and 5 tonnes at the front. The hydraulics produce 175 litres per minute through a maximum of six valves. The fuel efficient engine and powerful hydraulics can generate savings worth tens of thousands of euros per year.

The features and equipment on the S Series have been further developed together with customers. Valtra's TwinTrac reverse-drive system enables efficient working in reverse, for example for mowing, mulching and chipping. Working in reverse is generally very efficient thanks to the excellent visibility, more powerful rear linkage and enhanced agility. For example, mowing in reverse consumes around 10 percent less fuel than working in the forward direction, and it also reduces the amount of stressful neck and back twisting. The comfort of the S Series is crowned by AutoComfort cab suspension, which automatically adjusts the suspension according to the conditions.

Precision farming technology

Valtra's new S Series can naturally be specified with state-of-the-art precision farming technology, such as the AutoGuide 3000 steering assist system and AgCommand telemetry. The U-Pilot headland management system and Isobus readiness for implements come as standard. There is also a new colour screen with much higher resolution than before.

The reliability of Valtra tractors is backed up by the services offered by both Valtra and its dealers, such as



The aggressive new look features new vents for better airflow to the engine.

Valtra's new S Series can naturally be specified with state-of-the-art precision farming technology



The most powerful model in the S Series produces up to 400 horsepower and 1600 Nm of torque with boost. The engine has twin turbos and an electronically adjustable wastegate.

The market-leading transmission and engine technology that are designed to take on the toughest tasks.

a fast spare parts service, expert maintenance, competitive financing and even remote monitoring as enabled by AgCommand. With the support of our parent company AGCO, AGCO Parts, AGCO Academy, AGCO Finance and local Valtra dealers help ensure that all S Series tractors operate reliably around the clock, every day of the year, even in the toughest conditions. The Valtra S Series is available in Europe, South America, Africa and Russia. •

VALTRA'S NEW S SERIES	
	STANDARD MAX HP/BOOST HP • STANDARD NM/BOOST NM
S274	270/300 • 1220/1300
S294	295/325 • 1300/1390
S324	320/350 • 1390/1500
S354	350/380 • 1530/1590
S374	370/400 • 1540/1600



PHOTO JOHANNES MEULENER



Judith Romar drives a Valtra named 4 Sensation.

Power Weekend

AT THE RACES

TEXT AND PHOTOS FRITS GEUT

On 15 June the village of Made in North Brabant, the Netherlands, played host to the annual Power Weekend tractor pulling event. For three days the small village was turned completely upside down by the power and decibels produced by the competition tractors, a large number of which were Valtras.

Next Sensation

We visited **Jurian Duijn**, who competes in the Pro Stock Euro Cup class with Next Sensation, which is based on a Valtra T190. Jurian

tells us that last winter the machine was completely overhauled with some new ideas, new construction methods and new modifications and parts. The engine capacity was increased from 7.6 to 8.3 litres. The crankshaft is standard, but the bigger fuel pump with 17 mm pistons was specially tuned in the USA.

Next Sensation is driven with standard diesel fuel. The cylinder head has bigger valves, but only two per cylinder because that is regulated. At 6,000 rpm the engine produces about 2,000 horsepower with wheel spin of 100 km/h!

The upgraded Next Sensation has increased weight over the nose; the rules prescribe the dimensions of the tractor, but the distribution of weight is in your own hands. The gearbox was also modified, as fewer gears are required for tractor pulling.

Next Sensation has an enviable reputation. In addition to being national champion, it has been succeeding in European Championships and Euro Cup too.

Ice Bear and Baby Bear

In the next section we find the Bear team from Great Britain. The team spirit is palpable when it comes to the Valtra brand. When a door of the team van is opened and a blown turbo is brought up, everyone lends a hand. Solutions come from all directions, all to help their fellow Valtra competitor.

team members are willing to give a few short answers in a hurry.

“Valtra provides quality, even in extreme conditions like here.”

The eight-member team is unanimous. But we have to continue quickly before the lady interferes with the conversation.

“Look son, tractor pulling is a passion, not an obsession!”

4Sensation

At the end of the afternoon I find a female participant. **Judith Romar** drives a Valtra named 4 Sensation. In this form of motorsport, it is not important whether you are male or female as long as you have the skills to properly transfer the power of the tractor to the track. Judith doesn't disappoint. She is known to us, because in the winter months she serves as an ambassador to recruit sponsors. Proudly she shows her

new driver overalls with the embroidered logos of Valtra and AgriTech

4Sensation is based on a Valtra 6400 with a custom 4-speed gearbox. The engine has a modified cylinder head, a bigger turbo, an intercooler and an extra radiator. Even the crankshaft is modified. The Valtra look for 4Sensation was created using an M130 hood and fenders from the C Series.

4Sensation competes in the 3.4-tonne Super Sport class. 4Sensation is driven differently than Next Sensation. The challenge is to transfer as much traction as possible to the track by properly dosing the clutch. Judith is the right operator for this.

If you want to see 4Sensation in action, you should check out this video on YouTube: www.youtube.com/watch?v=7USLkSBD5AY.

The nice thing is that you can mute the noise! •

Tier 4 Final emissions standard

ENGINES RUN CLEANER WITH LESS FUEL

The first emission standards for off-road engines producing more than 130 kilowatts came into force in 1996 in Europe and North America. Prior to that, there were no restrictions on the emissions of tractors and harvesters, for example.

TEXT TOMMI PITENIUS PHOTO 3DOLLI

In 1996, the amount of nitrogen oxides in exhausts gases had to be reduced by 30 percent and the amount of particles by 10 percent. Since then, emissions have been reduced incrementally.

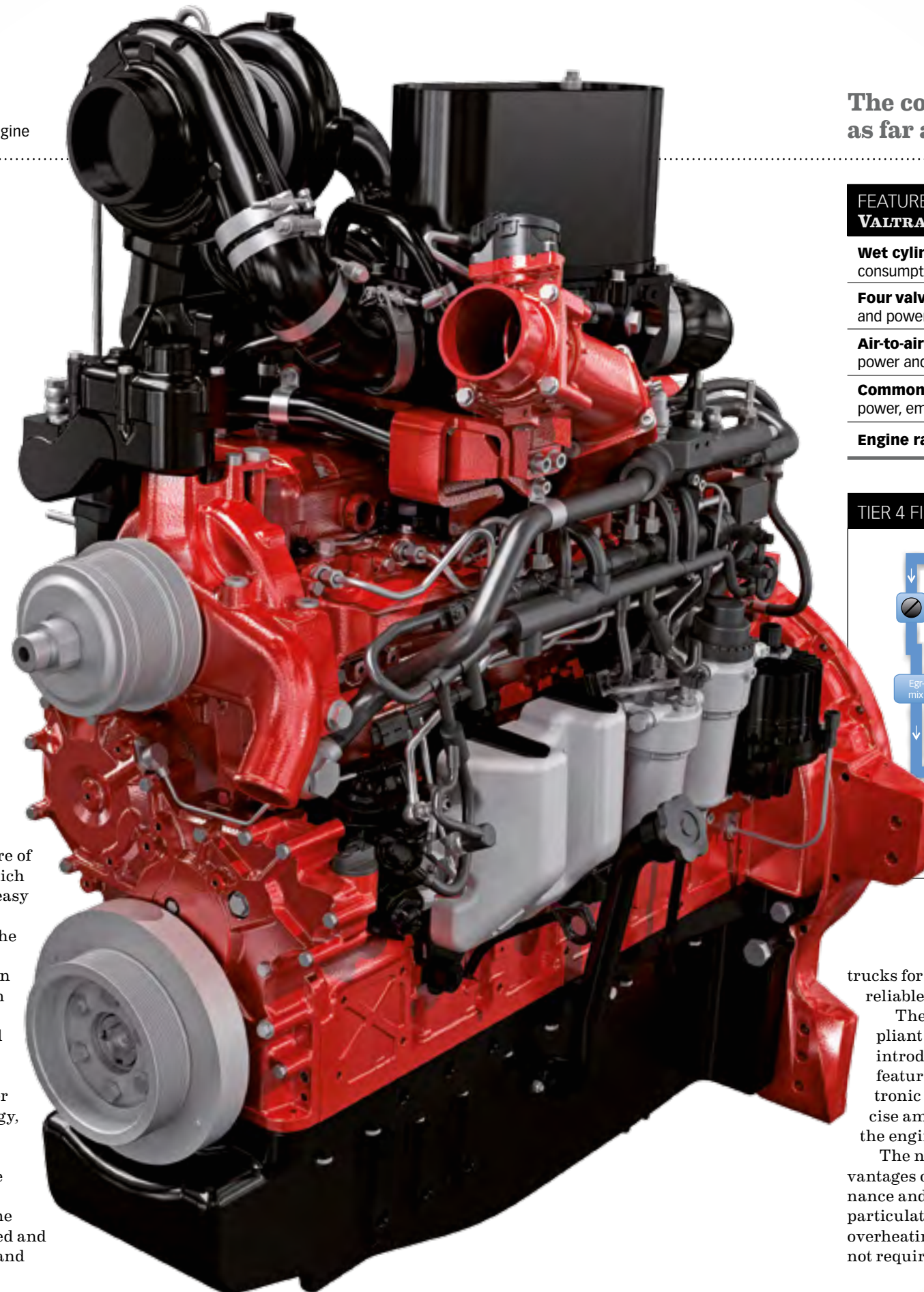
In 2014 emissions standards will reach their probable culmination with the introduction of Tier 4 Final. As a result, engines will emit 97 percent less nitrogen oxides and particles than they did in 1995. Essentially, these emissions have been eliminated altogether.

This target has been reached above all thanks to selective catalytic reduction (SCR), which allows the combustion in the engine to be optimised as far as possible with current technology. Exhaust gases are treated in the exhaust pipe by

spraying them with a mixture of urea and water (AdBlue), which is completely harmless and easy to use.

With the introduction of the Tier 4 Final emission standard, exhaust gas recirculation (EGR) is also employed. With this technology, some of the exhaust gases are cooled and fed back into the engine.

Valtra tractors use AGCO Power engines. AGCO Power is a pioneer in SCR technology, setting the standard for the entire industry. Valtra and AGCO Power introduced the technology to tractors back in 2008 with the S Series. The technology has also been tried and tested in industrial engines and



The combustion in the engine to be optimised as far as possible with current technology.

FEATURES AND ADVANTAGES OF VALTRA TRACTORS AND AGCO POWER ENGINES

Wet cylinder liners Enhanced engine life, precision, economy, reliability, oil consumption and emissions

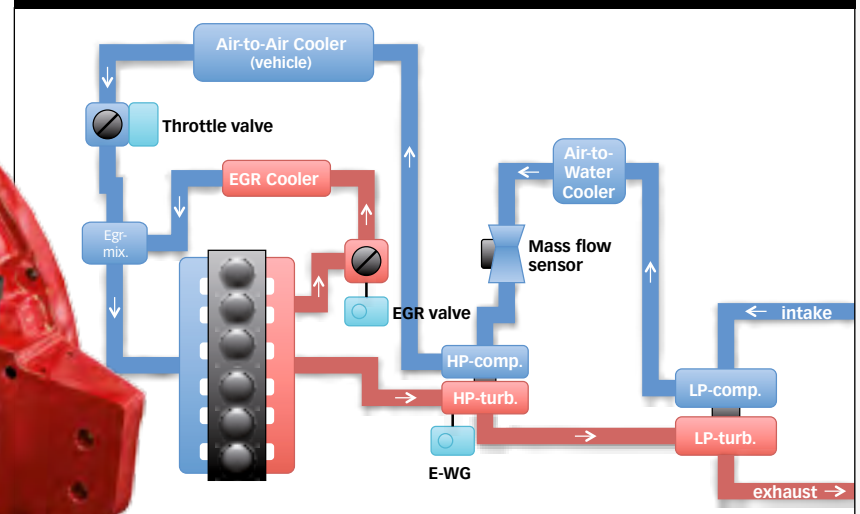
Four valves with central injection Enhanced combustion, gas exchange and power

Air-to-air intercooling from 160 to 55 degrees Enhanced fuel economy, power and emissions

Common rail injection and Sisu Tronic engine management Enhanced power, emissions, special functions and engine protection in case of malfunctions

Engine range from 3.3 to 16.8 litres 50–800 horsepower

TIER 4 FINAL SCR+EGR ENGINE



trucks for decades and been proven reliable.

The latest Tier 4 Final-compliant engines are also being introduced on the S Series. They feature twin turbos with an electronic wastegate, allowing precise amounts of air to be fed into the engine in all conditions.

The new engines offer the advantages of reliability, low maintenance and fuel efficiency. Expensive particulate filters that can cause overheating and become clogged are not required. Since the engines run

cooler, they also last longer. Combustion is further improved by precision injection with up to 2000 bar pressure.

The new emissions standard will be introduced in stages for smaller engines. Valtra and AGCO Power already have the technology required for all horsepower categories and purposes. Although the technological details vary, the customer always gets the most environmentally friendly, long lasting, reliable and fuel efficient engine available. •



A wide range of additional lights and rotating warning lights can be fitted by the Unlimited Studio.

Unlimited Studio

GROWS INTERNATIONALLY

TEXT TOMMI PITENIUS PHOTO VALTRAN ARKISTO

Valtra has been manufacturing tailor-made tractors for customers for the past 25 years already, and now we are taking customising to the next level. The Unlimited Studio at the Suolahti factory in Finland pledges to fulfil all the wishes that customers may have for their new tractors so long as they are feasible. The Unlimited Studio has been serving customers in Finland since last year, and now it is expanding its services to international customers. The response from customers has been very positive, and over a hundred specially equipped Unlimited tractors have already been delivered.

“In practice most of our orders are related to the intended tasks to be performed by the customer’s tractor, such as auxiliary hydraulics, reversing cameras, forest equipment, central lubrication systems, flashing lights and so on. A good example is a customer who always has his dog up in the cab when working. We modified the steps to make it easier

for his dog to climb up,” says **Petri Loukiala**, Project Manager at the Unlimited Studio.

“The Unlimited Studio is part of the Valtra factory, so the customer can order everything through the same salesperson cost efficiently and rapidly. All the work we do is covered by the same warranty as the tractor.



Over a hundred specially equipped Unlimited tractors have already been delivered to customers.

We can rely on the support of all the expertise here at the factory, from engineering to purchasing. The chassis number on our tractors also indicates all the parts fitted at the Unlimited Studio, making it simple to order spare parts in the future,” adds Loukiala.

As its name suggests, the Unlimited Studio can fit any equipment that the customer orders as long as they work and that they comply with all traffic regulations and requirements for type approval. The pricelist already includes the most popular equipment. In addition, all Unlimited tractors come automatically with Unlimited floor mats, seat covers, steering wheel logo and front badge.

Customers can order Unlimited options directly from their dealer, so neither the customer nor the salesperson has to transport the tractor back and forth. In principle, everything from the initial order to warranty matters are handled on a one-stop-shop basis. •



SEV during the “open house” meeting at the 20th anniversary.



↕↕ SEV safety education center in Drachten, the Netherlands.

↕ For the instructor there are double control pedals.

Driving safely with Valtra

DUTCH TRAFFIC SAFETY ORGANISATION TURNS 20

TEXT AND PHOTOS FRITS GEUT

On 9 September the Education Traffic Safety Foundation SEV in Drachten, the Netherlands, celebrated its 20th anniversary. The organisation has 350 members, mainly driving instructors, including 15 in Drachten. These professionals take traffic safety to a higher level by promoting better education for road users and even the instructors themselves. The clientele includes schools, contractors, municipalities and others.

SEV also provides training in agricultural traffic. In Drachten customers can qualify for their tractor driver’s license, which has been a somewhat contentious issue in the Netherlands. Many certified companies are responding and having their staff trained by the SEV. In addition to driving instruction, SEV provides technical training, as incorrect operation can affect tyre wear, the clutch, the brakes and even the environment. Health and safety regulations are also highlighted, including the proper way of climbing into and out of the cab to

prevent back and knee problems.

Special exercises are done on the test track and skid circuit, including braking with different loads and at various speeds. The same exercise is then repeated on a dry track, and then on a half wet and half dry track in order to teach how to control the combination under all circumstances. The same exercise also includes pulling a half-loaded slurry tank, where the contents can move considerably under braking.

Attention is also paid to connecting and disconnecting implements and trailers safely. It is important to maintain control of the vehicle at all times, especially when reversing with a trailer into a dark barn, for example.

Valtra N121 training tractor

In addition, SEV teaches a “new way of driving” that uses maximum torque to save fuel. Valtra is one step ahead of the game in this regard. For example, on the T163e Direct 2.0,

software maximises economy. However, since in the Netherlands many older tractors are still in use, it is important to teach drivers how to drive efficiently.

The SEV foundation also has a public function. For example, at farmer’s fairs and public seminars the SEV stand features a Valtra tractor to draw attention to agricultural traffic. This allows SEV to interact both with the general public and with farmers and contractors, which helps promote mutual respect and understanding.

SEV has a Valtra N121 that was specially designed for instruction purposes. The tractor has a dual set of pedals, so the instructor can intervene if necessary. The pedals are designed so they can be removed easily to facilitate access to the cab.

The story of how SEV chose Valtra is interesting. One of the participants at its courses is Nordwin College, which ran an exchange program with the Keuda institute in Mäntsälä, Finland. Keuda has used only Valtra tractors for many years to the satisfaction of everyone. Back in the Netherlands, SEV duly contacted the local Valtra dealer and Agritech closed the deal with SEV. After all, when it comes to safety and efficiency, Valtra is the perfect choice. •



The latest version of Valtra's stepless transmission has won praise from owners around the world.

The new Direct 2.0 is even easier to use, more powerful, quieter, more comfortable and more fuel efficient than previous versions. For example, cab noise levels on the T163 EcoPower model have been reduced to just 68.5 decibels.

The Direct 2.0 transmission is available with the N123, N143, N163, T163e, T183 and T203 models.

TEXT TOMMI PITENIUS PHOTO ARCHIVE VALTRA



European owners satisfied with their

DIRECT 2.0 TRACTORS

POWERFUL AND EASY TO USE



Jerome Bagland.

Jerome Bagland Indre et Loire, France

Jerome Bagland farms 600 hectares in Central France. His livestock includes poultry and Charolais cattle. He has four Valtra T Series tractors, one Valtra N Series and one new S Series on its way. His newest tractor is a T203 Direct.

"Valtra tractors are strong and reliable. My local dealer **Max Berny** also offers excellent service and support. I use my T203 Direct for such tasks as soil preparation and slurry spreading. It is quiet and good on the road thanks to its front axle and cab suspension," Jerome reports.



Martijn Voorbraak.

Martijn Voorbraak West Brabant, Netherlands

Martin Voorbraak farms 100 hectares in the Netherlands, where he grows food potatoes, seed potatoes, grass seeds, and endive. His tractor fleet includes an 8100, an 8050, an N141 and a T203 Direct. He uses the T203 Direct for such tasks as sowing, planting, ploughing and cultivating.

"The stepless transmission is great on the potato fields, since I can adjust the speed infinitely, and on the road the engine needs very low revs. The T203 Direct is quiet, comfortable thanks to the suspension, easy to use and really powerful," Martijn reports.



Markus Renner.

Markus Renner Reuth, Germany

Markus Renner has a 110-hectare dairy farm with 90 cows in Reuth, Germany. He uses a T203 Direct to harvest corn and grass silage using a 9-metre mowing combination and to spread slurry with a 18-cubic-metre wagon.

"The stepless transmission is really excellent when driving through villages and in traffic, as it is really easy to start and stop. The weight distribution is also extremely balanced, so the front axle pulls well. The T203 Direct is so comfortable that it's almost a disappointment when the workday ends and I have to climb out! I'd love to just keep on driving," reports Markus.



”The T203 Direct is so comfortable that it’s almost a disappointment when the workday ends and I have to climb out!”



Markku Ruuska.

**Markku Ruuska
Äänekoski, Finland**

Markku Ruuska has a 68-hectare dairy farm with 25 cows in Central Finland. His main tractor is an N163 Direct, which he uses around 800 hours a year. The farm has had Valtra/Valmet tractors since the 1960s. His previous tractor was a N143 Direct.

“The fuel economy of the N163 Direct with its stepless transmission was a positive surprise. The tractor needs just 1,300 to 1,600 revs. The average annual fuel consumption is 8 litres per hour. When spraying and

rolling, the fuel consumption is just 6 litres per hour. With a four-furrow plough the fuel consumption is 9 to 10 litres per hour, and with an 8-metre levelling harrow the fuel consumption is 20 litres per hour. The AdBlue consumption is next to nothing in winter-time, and in summertime it has to be topped up every fourth or fifth time that I tank up with diesel. The four-cylinder tractor is lighter and more agile than the six-cylinder tractor, and it has better visibility from the cab. The transmission is smooth, and the level of automation really helps the driver’s work,” Markku reports.



Ahti Mansikka.

**Ahti Mansikka
Loppi, Finland**

Ahti Mansikka farms 120 hectares in Loppi, Southern Finland. He has an N163 Direct to cultivate grain. Ahti uses his Valtra as much as 2,500 to 2,700 hours per year.

“I spend a lot of time in the cab. In wintertime I also use the tractor for snow ploughing and preparing skating rinks. In summertime I use it on the road, for contracting, transporting irrigation water and of course for cultivating. My N163

Direct has front axle suspension, an air-conditioned Evolution driver’s seat, a five-pillar SVC cab, all the possible wheel weights, two rotating warning lights on the roof, a front loader and even Bluetooth. The tractor is really quiet thanks to the low revs needed by the stepless transmission. The cruise control feature is excellent, and the cab is ergonomic with all the main controls on the right. Driving with the pedal is easy, and the tractor is really agile in built-up areas,” Ahti reports. •



In 2013 German DLV named Valtra Sigma Power an influential milestone of agricultural technology.

Sigma Power

MILESTONES

In February 1988 Valmet’s chief design engineer **Hannu Niskanen** met his childhood friend, **Heikki Eskola**, a livestock farmer and contractor in Nivala, Finland. Auto-control had just been introduced, and Hannu praised the advantages of electronics in such tasks as ploughing, for example. Heikki replied, “I can manage my ploughing in a couple of days, but I have to run a forage harvester the entire summer. What would be great is extra power from the PTO.”

This got me thinking, and an idea occurred to me a few days later. The engine is the power source for three different functions: for the transmission to the wheels, for hydraulic power, and for the mechanical PTO. If a certain amount of power is transferred through the wheels, it would be possible to run more engine power through the PTO. A patent was duly applied for, and the idea was tested

by the Norwegian ITF research institute with positive results. **Pekka Huuskonen** completed the design.

In 1992–1993, the global tractor industry was in crisis, Valmet included. Just one sector was growing: peat for energy. In response, Valmet introduced its “Peat Special” – an 8400 with a turbocharged 6.6-litre Valmet engine producing 140 horsepower, a three-speed Delta Powershift and a heavy-duty 1,000 rpm PTO transmission using a large diameter 45 mm PTO shaft. This model proved to be a success among customers.

The introduction of a new long-stroke 7.4-litre Valmet engine together with the reinforced transmission and heavy-duty PTO meant that all the pieces were in place for Sigma Power. The Mega 50 Series was duly launched in France in the spring of 1996. The flagship was the Valmet Mega 8750 Sigma Power that had a



Chairman of DLG Philip von Bussche awards Valtra’s CEO Jouko Tukiainen with a gold medal at Agritechnica 1997.

nominal output of 160 horsepower when only the driving transmission was used. However, when the torque exceeded 250 Nm, the injection pump increased the maximum power to 190 horsepower. The control system was based on the torsion of the long shaft between the engine and PTO mechanism.

In 1997, Sigma Power was awarded the Gold Medal at the Agritechnica fair. Since then, more than 10,000 Valmet/Valtra tractors have been manufactured utilising the Sigma Power principle. With the introduction of electronically controlled common rail technology, it became easier to manipulate the power and torque curves, and new terms appeared such as transport boost and PTO boost. But Sigma Power was the pioneer.

Today, Sigma Power PTO boost is available on all new S Series models, as well as on the T213, T203, T183 and N163 models. •

Raymon Niesten relaxed driving his 3,20 meter wheel track Valtra by GPS.



DUTCH BIOLOGIC FARMER RELIES ON HIS N143

TEXT AND PHOTOS FRITS GEUT

In August we visited the Niesten family in Maastricht, the Netherlands. **Raymon Niesten** is biologic farmer, and his wife runs the farm's bed & breakfast on the outskirts of the city. The buildings reflect the local Limburg tradition, complete with courtyard. In this region the fields are not ploughed. Instead, everything occurs according to the minimum tillage system to prevent erosion in the hilly countryside.

Raymon Niesten relies on his new Valtra N143 tractor, which was delivered last spring. Having clocked

up more than 400 operating hours already, Raymon is pleased with his new Valtra. He selected Valtra especially because of its strong rear drive-line, which is essential because the tractor has a modified 3.20-metre wheel track using rear wheel spacers. Although the modification required simply cutting and welding, the end result is a masterpiece of craftsmanship.

Other arguments in favour of the Valtra included its strong four-cylinder Agco Power engine, its low weight and agility, and not least its

reliability. In the past, Raymon was somewhat disappointed when other leading brands with reputable engines were in service after 7,000 hours. By comparison, he is convinced of the reliability of the Valtra. The suspension absorbs and prevents most shocks, and the tractor is also extremely stable.

Dealer modifications

The N143 was supplied by LMB Bèr Huynen in Margraten, which sold Raymon Niesten his first Valmet 6600. **Robèrt Huynen** developed the

front axle solution together with Niesten and an acquaintance constructor. The tractor also features a navigation system that was completely customised by Huynen and integrated into the N143.

This year Raymon Niesten switched to the tramline system. Supported by GPS, the tractor can be driven along the exact same lines year after year. The big advantage of this is that there is no structure deterioration to the 3-metre tilled soil, so the biological life in the ground is not affected by soil compaction.

"Let nature do its work itself. Nature can do it. In this way the soil has less harmful pathogens," explains the biologic farmer. When we visited Raymon, a parcel grassland containing clover was being tilled.

The tractor and the implements are controlled by the GPS system. In combination with the tramline system, this results in a more even surface. Weeding is Raymon's favourite field job. Since the tractor was specified with the TwinTrac reverse-drive system, Raymon simply turns the seat and concentrates

on the weeding. The tractor takes care of itself.

As a second option, the essential control functions were connected to a remote terminal. With this system, Raymon can now walk behind the machine and adjust it while working. If necessary, he can intervene by remote control. In the future, Raymon plans to switch his other implements to the tramline system. He has already purchased a slurry tank on a 3.20-metre wheel track and fitted with steering axle. •



Using wheel spacers the N143 has 3,20 meter wheel track.



Raymon Niesten.



The N143 is driving the same tramlines every year.

“The biggest risks to farming are the weather, the markets and politicians.”

Max Schulman

REPRESENTS EUROPEAN FARMERS

TEXT TOMMI PITENIUS PHOTO MTK



Max Schulman from Finland serves as Chairman of the Cereals Working Party at Copa-Cogeca, an organisation that represents 15 million farmers and cooperatives in the European Union.

What is the current state of European farming?

“Farmers face a lot of challenges, just like all entrepreneurs, but we are moving in the right direction. The biggest risks that farmers are facing are the weather, the markets and politicians. Political changes are the hardest of these to control, as changes to the weather and market conditions can be anticipated through insurance policies, futures and other means, but there is no insurance policy against political change. At Copa-Cogeca we work to influence the preparation of legislation, subsidy policies, trade policies and co-operation throughout the industry.”

How did you become Chairman of the Cereals Working Party at Copa-Cogeca?

“Finland is by no means the biggest agricultural producer in Europe, but

we are considered neutral in many issues. Our deputy chairmen are from Germany and Great Britain. On a personal level I have always tried to work well together with all parties.”

You are also Secretary for Cereals at the Central Union of Agricultural Producers and Forest Owners (MTK) in Finland, plus you run your family farm. How do you combine all three jobs?

“It requires long working hours sometimes. My position at MTK is my main job for which I am paid a salary. My position at Copa-Cogeca is an honorary one that counts as working hours at MTK. Farming comes on top. For example, in summertime I went out at four in the morning to spray the crops, then flew to Brussels for a meeting at ten and then returned to continue spraying before midnight.”

How does the future of European farming look?

“European farming has traditionally been the most efficient in the world, and we have excellent know-how, machinery, yields, markets and so on, but now other regions – such as

North and South America and Australia – have caught up with us. In emerging economies, such as China and India, agriculture is seen as an important opportunity, source of raw materials, employer, energy source and enabler of food self-sufficiency. In Europe some politicians have considered agriculture to be a sunset industry and forgotten that we all need to eat every day. At Copa-Cogeca we are trying to change this way of thinking.” •

MAX SCHULMAN

- 1983–1985 Works in the grain trade in the USA
- 1986 → Farms 100-hectare family farm in Lohja, Finland (continues)
- 1989 Does agricultural work in New Zealand
- 1991–1994 Works at Foreign Trade Unit of the Finnish State Granary
- 2001–2003 Works in the agricultural machinery trade
- 2003–2008 Works at Valtra, including as Product Manager
- 2008 → Secretary for Cereals at the Central Union of Agricultural Producers and Forest Owners (MTK)

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Valtra Models



A SERIES

MODEL	MAX. HP/NM
A53	50/196
A63	68/285
A73	78/310
A83 HiTech	88/325
A93 HiTech	101/370



S SERIES

MODEL	MAX. HP/NM
S274	270/1220
S294	295/1300
S324	320/1390
S354	350/1530
S374	370/1540



N SERIES

MODEL	MAX. HP/NM
N93 HiTech	99/430
N103 HiTech	111/465
N103.4 HiTech	111/460
N113 HiTech	124/510
N123 HiTech	135/540
N143 HiTech	152/600
N93 HiTech 5	99/430
N103 HiTech 5	111/465
N103.4 HiTech 5	111/460
N113 HiTech 5	124/510
N123 HiTech 5	135/540
N123 Versu	135/540
N143 Versu	152/600
N163 Versu	163/650
N123 Direct	135/560
N143 Direct	152/600
N163 Direct	163/650



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T SERIES

MODEL	MAX. HP/NM
T133 HiTech	141/580
T153 HiTech	155/640
T173 HiTech	180/660
T193 HiTech	190/680
T153 Versu	155/640
T163e Versu	166/740
T183 Versu	187/770
T213 Versu	215/850
T153 Direct	155/640
T163e Direct	166/740
T183 Direct	187/770
T203 Direct	204/800