

VALTRA

Individually Yours

Valtra N Series

HiTech / HiTech 5 / Versu / Direct

99 - 171 HP





Valtra N Series

99 - 171 hp / HiTech - HiTech 5 - Versu - Direct

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Individually yours

UNIQUE CUSTOMER ORDER SYSTEM

Each Valtra tractor is tailor made according to the individual needs of the customer. To help customers choose the exact equipment and specifications that they require for their tasks, dealers use the Valtra à la Carte tool. The selection covers over half a million possible combinations and special Valtra features, for every preference and every possible field of work. In this way customers pay only for what they really need while helping to save the environment too. The à la Carte customer order system is an efficient and ecologically sustainable way of tailoring tractors today and for the future.

Valtra offers unique features only available on Valtra tractors. These features are designed to improve your productivity and comfort:

- › TwinTrac – reverse drive system
- › AutoComfort – cab suspension
- › SVC Cab – side visibility cab
- › Aires – front axle suspension
- › HiTrol – turbine clutch
- › ForestCab – for improved visibility and safety in forest work
- › ForestTank – integrated steel tank for extra protection
- › Valtra LH Link – pivoting front linkage
- › U-Pilot – headland management system
- › AutoTraction – drive only with accelerator and brake pedals

INDIVIDUALITY

Valtra tractors are designed, manufactured and sold as individual solutions for the customer. We work together closely with the customer and nurture a close partnership with customers, partners and colleagues on all levels of the organisation.

RELIABILITY

Our products are designed for demanding conditions and built to last from one generation to the next. Valtra employees are professionally skilled and work reliably from the factory floor to customer contacts. We are flexible and our promises are realistic.

FUNCTIONALITY

Thanks to our Scandinavian heritage, our products are designed to be attractively unpretentious. They offer exceptional levels of practicality, ergonomics, safety and comfort. Similarly, dealing with our organisation is straightforward and easy.





Made in Finland

The first Valmet 15 tractors were manufactured in 1951. In 1960 Valmet established a tractor plant in Mogi das Cruzes, Brazil. In 1979 Valmet acquired the tractor operations of Swedish company Volvo BM. Together with its own predecessors Bolinder and Munktell, Volvo BM had deep roots in the industrial history of Sweden.

The AGCO POWER engine plant in Linnavuori, Finland, is an integral part of Valtra's history. The Valtra tractors manufactured in Suolahti have all been powered by engines from AGCO POWER or its predecessors Sisu Diesel and Valmet.

In the past five years Valtra has invested in product development projects. As a result, Valtra's model line-up has in practice been completely renewed.

The Suolahti factory has been modernised in recent years with investments worth tens of millions of euros. AGCO is also investing in its ERP and IT systems, as well as work methods.

These major investments will be manifested for farmers and contractors in the coming years in improved service and the possibility to specify even more precisely the tractors they need for their own work. Valtra has manufactured tractors solely on the basis of individual customer orders for over 20 years, and the new investments will further increase Valtra's lead over its competitors.

VALTRA PHILOSOPHY

Tractors in the Nordic countries have traditionally been used to perform a wide range of tasks. Customers have demanded the performance required to handle all jobs on the farm – including forestry work. Valtra tractors have been designed to fulfil these requirements. The basic design of Valtra tractors combined with AGCO POWER

engines are made for these tough northern conditions, where absolute reliability is essential. True to the Nordic tradition, Valtra tractors are compatible with a wide range of forest tasks without additional customisation. The need to make changes to your tractor is further reduced by our unique customer order system, which allows you to tailor your new tractor to your own individual requirements without having to pay for features that you will not use.

If you visit Suolahti to see your own tractor being built, you will find the Valtra factory in the middle of the forest. This is where all Valtra tractors destined for European markets are manufactured, including the A, N and T Series.

The factory area includes

- 1. The AGCO spare parts centre**
- 2. The transmission plant**
- 3. The engineering centre**
- 4. The tractor assembly plant and**
- 5. Customer reception centre**

Over 10,000 tractors a year are built here and over 80% of production is exported.

Valtra's tractor plant is an ISO 9001 certified factory.





N Series 99 - 111 hp

It's all about attitude

Valtra have added two more models to the N series range - the N93 and N103. Our long innovative history with AGCO POWER has once again proved its success. The new three-cylinder engine is an economical choice for customers who are looking for practical power. The agility of these two models is overwhelming. A new bonnet design gives you excellent visibility and makes loader work easy and safe. On top of that we are introducing the new HiTech 5 five-step powershift transmission which is simple and smooth to operate. The practical, clear Nordic design is ergonomic and functional.

These characteristics make N93 and N103 the best in their class.

New design

improved productivity

The new N93 and N103 models have a new front-end frame design with an integrated front linkage as an option. It has a similar construction to four cylinder N-models. The lifting power is 28 kN. On the new N Series models the bonnet and everything under it has been re-designed. The

wheelbase is 2533 mm, which is 1,5 mm shorter than on previous N82 and N92 models. The new features also include the HiTech 5 transmission, new transmission user interface and boosted brakes on HiTech 5 models.



Wide choice of cab options				
Cab options	N93 HiTech	N93 HiTech 5	N103 HiTech	N103 HiTech 5
Cab suspension		•		•
SVC Cab	•	•	•	•
Forest cab	•	•	•	•
TwinTrac		•		•
Rear accelerator	•	•	•	•
Air conditioning	•	•	•	•
Heated rear window	•	•	•	•
AGCOMMAND ready	•	•	•	•

Highlights

- 1 Economical three-cylinder engine saves costs
- 2 Excellent visibility makes working easy and safe
- 3 Excellent agility improves productivity
- 4 New HiTech 5 transmission improves operation
- 5 New front end frame design and front loader subframe improves front loader work productivity and agility



A revolutionary engine

Compact, powerful and fuel efficient

Valtra's new lower hp end of the N-series range has a totally new type of engine from AGCO POWER. This three cylinder engine has already gained a good reputation in A Series tractors.

New engine is called 33AWI, where A stands for after treatment, W for Waste gate and I for intercooler. This is a four valve engine, with rated power at 2200 r/min and max power at 1950 r/min. These relatively low engine speeds give modern engine characteristics even in the 100 hp class. This results in low fuel consumption and effective operation.

The new engines meet the Tier 3B emissions

regulations by using a combination of a Diesel Oxidation Catalyst (DOC) and cooled exhaust gas recirculation (EGR). The new solution requires no particulate filter and emissions are reduced by 90%. Compared to N-series stage 3B tractors with Selective Catalytic Reduction and four cylinder engines, the DOC materials are similar but the catalyst is larger in size. Also the diesel odors and engine noise are controlled effectively - there is no need for a further silencer!

The common rail fuel injection system is now more efficient, offering up to 1600 bar injection pressure and extreme precision. The bonnet size is very compact giving the operator good visibility. A viscous fan is fitted to keep the cooling efficiency high.



Engine, AGCO POWER

Model	Type	hp	Kw	Nm
Valtra N93	33AWI	99	73	430
Valtra N103	33AWI	111	82	465



HiTech 5 transmission

A completely new and
simple to use transmission

HiTech 5 is a new five-step powershift transmission that increases the speed from powershift step 1 to step 5 by 128 %. It has 20+20R speeds, with optional creeper 30+30R. HiTech 5 is simple to use, but it still gives the operator full control over the four groups and five powershift steps. The transmission has no gear levers: there are four electronic ranges, and all gears are changed electronically, either automatically or manually. With AutoTraction, Automatic Powershift and optional cruise control

the tractor is extremely well equipped for even the most demanding operator. Creeper gears and ground speed PTO are optional on all models.

Both the transmission and hydraulics use the same oil. The capacity for the hydraulics is 73 l/min (90 l/min optional) with open centre hydraulics. The gear pump is located in the transmission housing. The hydraulic control valves are mechanical.

[Read more about HiTech 5 on page 23](#)





N Series 124 - 171 hp

Productivity demands versatility

The Valtra N Series offers the very best performance and specifications in a balanced and functional package. The Valtra N Series represents Nordic practicality at its best, enabling year-round use even in the most demanding conditions. All primary modules are designed and built in-house, including the engine, chassis, transmission, rear axle, hydraulics and cab. For us, versatility means that the same tractor can be used in various tasks and conditions, which is why contractors like Valtra tractors.

MOST POWERFUL FOUR-CYLINDER TRACTOR

The N Series brings to market a four-cylinder tractor that is stronger and more efficient than the competition. Valtra has traditionally been able to do the work of six-cylinder tractors with its four-cylinder models, and this has now been taken to a new level. A compact and powerful tractor increases productivity, in addition to which the new N Series offers unprecedented fuel economy thanks to SCR engine technology that complies with the latest emissions regulations (Stage 3B).

The new N Series has been designed as a compact four-cylinder tractor, with a power range up to 171 horsepower offering the ideal solution for most tasks on livestock and crop farms – as well as for municipal and forest applications in keeping with Valtra's philosophy.

The third generation of the Valtra N Series introduces many

new features, while the robust design remains and has been further developed. The most powerful model in the N Series range, the N163, takes four-cylinder tractors into a new power class.

INDUSTRIAL DESIGN IS WHERE OUR ENGINEERING IS THE BEST IN THE WORLD

The new design of the N113 - N163 models not only looks good, it also reflects functionality. The new engine cover is attached to a completely reworked front-end structure. The wheelbase has been lengthened by 100 mm to allow the latest SCR technology to be integrated with the design. Despite the longer wheelbase, the agility of this compact tractor has been retained. Thanks to a new type of integrated front linkage and front-loader brackets, the turning circle of the new N Series is not hindered by the addition of this equipment.





RUE
DES VENELLES

D 95

Moissy le Girard
HIGNONVILLE
SERMAISES

LOIRET
Fromonvilliers 3,5
ANDONVILLE 6
8 ACOUEBOUILLE
13 BAZOCHES LES G.
45 ORLÉANS

Four transmission choices

for different users



HITECH

- › Base model
- › Three powershift gears
- › Open centre hydraulics
- › Two gear levers



HITECH 5

- › New model series
- › Five powershift gears
- › Open centre hydraulics
- › No gear levers



VERSU

- › Five powershift gears
- › Load sensing hydraulics
- › Valtra Arm



DIRECT

- › Stepless transmission
- › Load sensing hydraulics
- › Valtra Arm

Model	Engine, AGCO POWER		Transmission				Turbine clutch (option)
	Type	Max power, hp STD / boost	HiTech	HiTech 5	Versu	Direct	
Valtra N113	44AWI / 4V	124 / 130	•	•			•
Valtra N123	44AWI / 4V	135 / 143	•	•			•
Valtra N143	49AWI / 4V	152 / 160	•		•	•	
Valtra N163	49AWI / 4V	163 / 171			•	•	

Optimised agility

The turning radius on standard tyres is just 4.5 metres, which is unaffected by a front loader or front linkage.

- › New front end solution with more integrated front linkage and front loader. The outstanding agility of the new N Series is not affected by a front loader – 20% more agile than before
- › The wheelbase has been increased by 100 mm – which in turn enhances stability

A flat belly and high ground clearance are traditional features of Valtra tractors.

These features not only help the tractor cope well in forestry, but also means that when planting potatoes and other crops which need good ground clearance, the tractor does not have to be specially modified. When in deep mud ruts, the high ground clearance and flat underside means tough conditions can be negotiated easier.

Weight distribution is also a key feature of Valtra tractors. With an even weight distribution, maximum grip is transferred to the ground, without additional weight needing to be added.



AGCO POWER engines

Strongest four cylinder

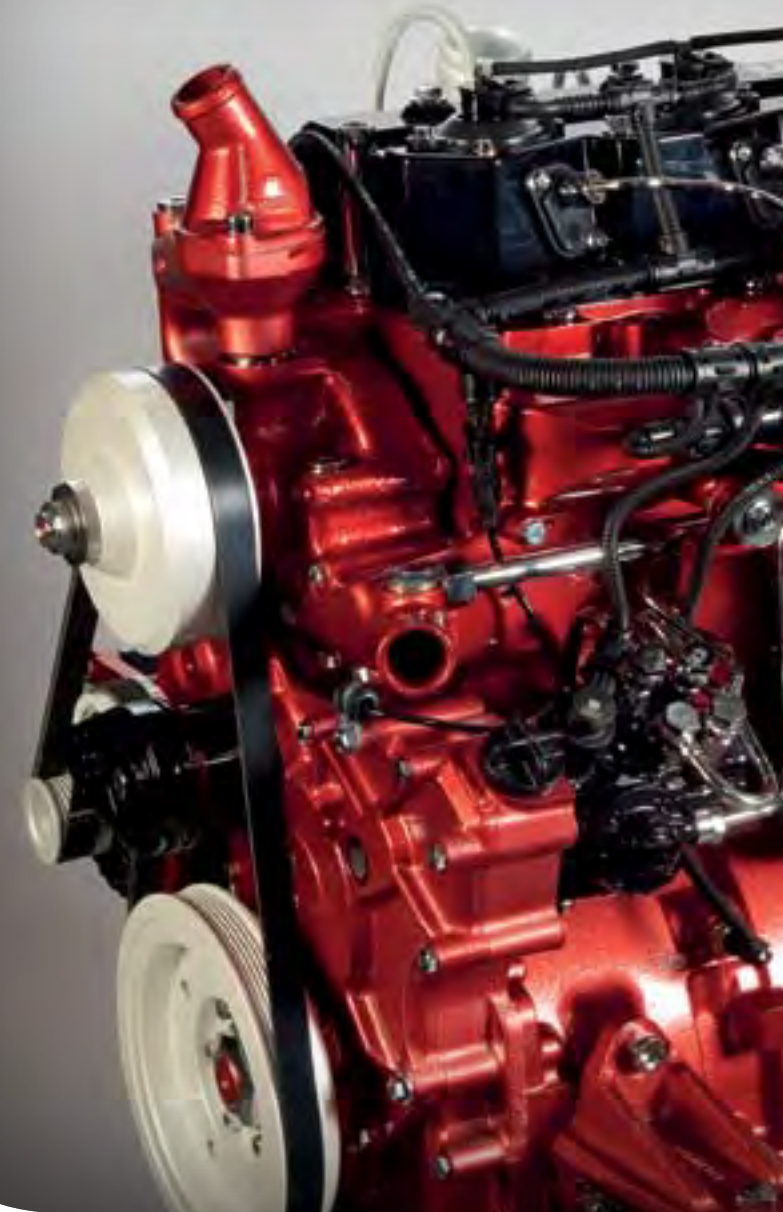
The new 4-cylinder AGCO POWER 44AWI or 49AWI Common Rail engine is the heart of the N Series. These engines feature SisuTronic EEM3 electronic engine management that can adjust the fuel injection up to five times per combustion. The engine offers tried, tested and reliable technology that performs efficiently in all conditions. The strong design of AGCO POWER engines has proven its excellence over the years.

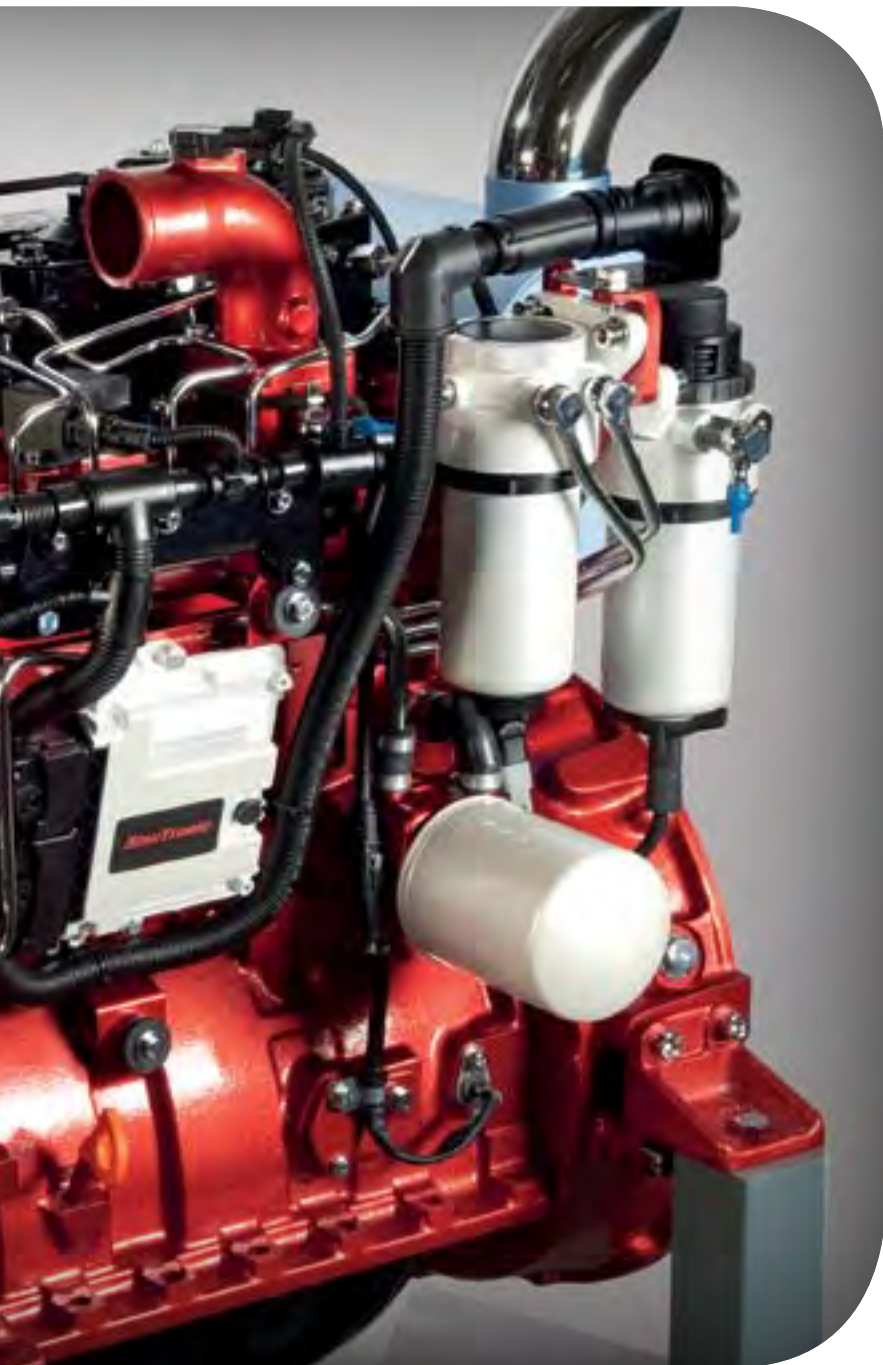
ELECTRONIC ENGINE CONTROL ENABLES VERSATILE CRUISE CONTROLS

A viscous fan and common rail fuel injection make the engine quiet while still providing excellent power and torque for all tasks. The engine complies with Stage 3B emission requirements. High torque means a lot of power at low revs, which improves fuel economy and towing power while reducing noise levels.

Clean air into the engine = cleans exhaust emissions and lower fuel consumption. The engine's radiator and Intercooler are now positioned next to each other. The transmission cooler and air-conditioning condenser are now hinged to make them easier to clean. An upright engine air intake is standard on N113 - N163 models.

THE NEW 49 AWI – 4V ENGINE
IS THE MOST EFFICIENT 4 CYLINDER
TRACTOR ENGINE ON THE MARKET

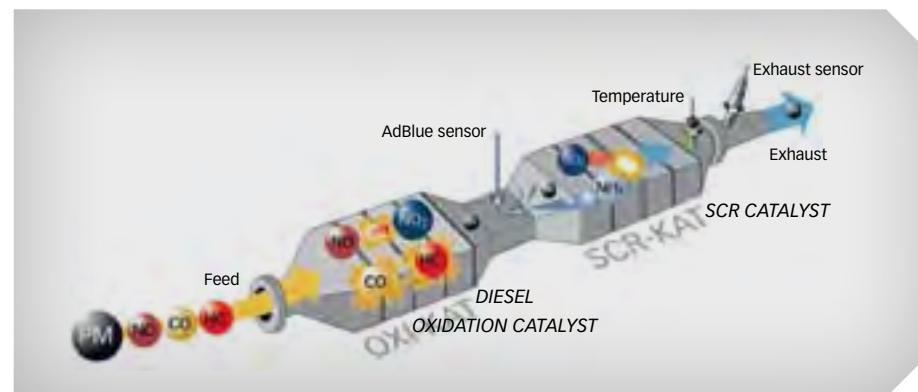




N SERIES ENGINE IN A NUTSHELL

- › Many changes have been made beneath the engine covers of the new N Series models, but power and torque are still produced by Valtra's own engine, AGCO POWER
- › The common rail engines have higher pressure (1600/1800 bar) and more precise multi-stage injection that offers excellent efficiency and clean combustion
- › New generation of engines – the most powerful 4.4- and 4.9-litre four-cylinder engines on the market: 44 AWI (4.4l models in N113 & N123) and 49 AWI (4.9l models in N143 & N163)
- › More stringent emissions regulations have led to significant advances in engine technology, also for tractors. SCR technology has now been introduced on the Valtra N Series
- › SCR technology helps to clean exhaust emissions by using a urea-water solution (AdBlue)
- › By eliminating harmful nitrogen oxide emissions through exhaust gas after treatment, the combustion in the engine can be made more efficient with four-valve technology and higher injection pressures. The entire injection system is new
- › **Efficient combustion also means improved fuel consumption – by up to 10% compared with previous Stage 3A engines**
- › The careful positioning and optimal sizing of components (a combination of two different types of catalytic converter) allows the size of the tractor to be kept compact
- › SCR engines use only clean air, which helps prolong engine life. In addition, the use of AdBlue pays for itself in terms of improved fuel efficiency

AGCO POWER SCR PRINCIPAL



Transmissions

HiTech 5 / Versu / Direct



HiTech 5

User-friendly powershift transmission

- › Five-step powershift (128% speed increase from steps 1 to 5)
- › 20+20R speeds, 30+30R with optional creeper gears
- › Automated shifting of main gear – no gear levers
- › Easy to use – four main gears and five-step powershift
- › Available with HiTrol turbine clutch (N113 and N123)
- › AutoTraction (standard) and Cruise Control (optional)
- › Available on N93 - N123 models
- › Max hydraulic pump output of 90 l/min is available as an option

TURBINE CLUTCH



AUTOTRACTION



Valtra have designed an entirely new transmission which now combines a simple, user-friendly electronic shift gearbox with traditional mechanical spool levers. The result is an uncomplicated tractor that anyone is capable of driving immediately. The tractor is still packed with features to please even the most demanding of operators. In automatic mode the Speed Matching system immediately finds the ideal powershift gear to match the speed when changing between main gears. The kick-down feature shifts to a lower gear temporarily in response to sudden inputs with the accelerator pedal, allowing faster acceleration. In addition, the automatic shifting also works ideally with engine braking. In HiTech 5 models the automatic transmission also changes between gear ranges (C <-> D) if required.

TURBINE CLUTCH

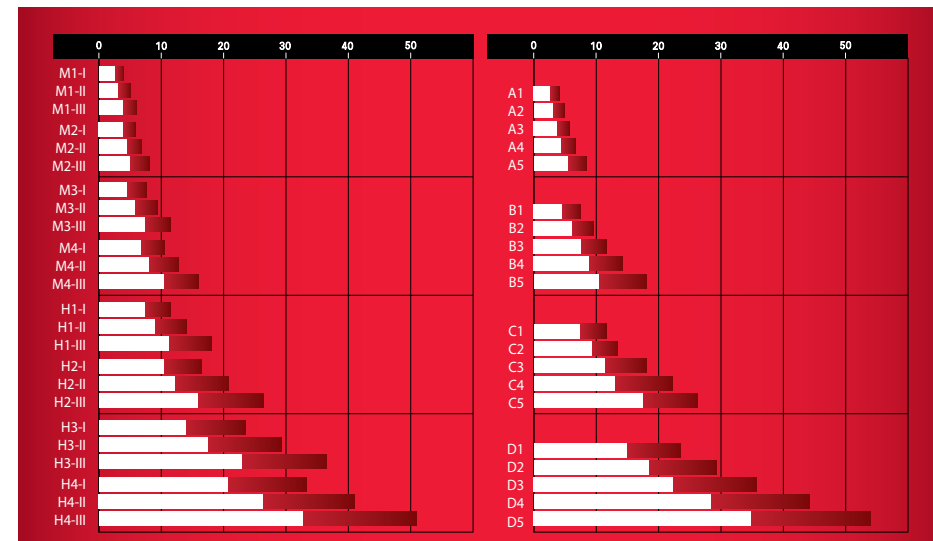
The turbine clutch is a unique Valtra feature. This fluid clutch has a pump wheel and a turbine wheel that can rotate freely relative to each other. As the engine speed increases the oil flow

created by the pump wheel causes the turbine wheel to rotate. When the engine is idling, little or no power is transmitted. The power transfer begins from around 1000 rpm, and at 1400 rpm nearly all power is transferred. The maintenance-free turbine clutch gradually feeds power to the wheels to increase traction and avoid wheel slip. This is excellent in slippery conditions or when used in conjunction with a front loader, to avoid tyre wear.

AUTOTRACTION

AutoTraction (Auto-N – also a unique Valtra feature) automates much of the driver's routine work in tasks that require repeated stopping and starting, such as when baling and in forestry work. AutoTraction automatically disengages the drive when the engine speed is under 1100 rpm or when the brakes are used at a speed of less than 10 km/h. The drive automatically re-engages when the brakes are released and the accelerator pedal is used raising the engine speed to above 1100 rpm. AutoTraction makes it easy to operate the tractor using only the accelerator and brake pedals.

HITECH AND HITECH 5 SPEED CHART (WITHOUT CREEPER)



Versu: N143 and N163

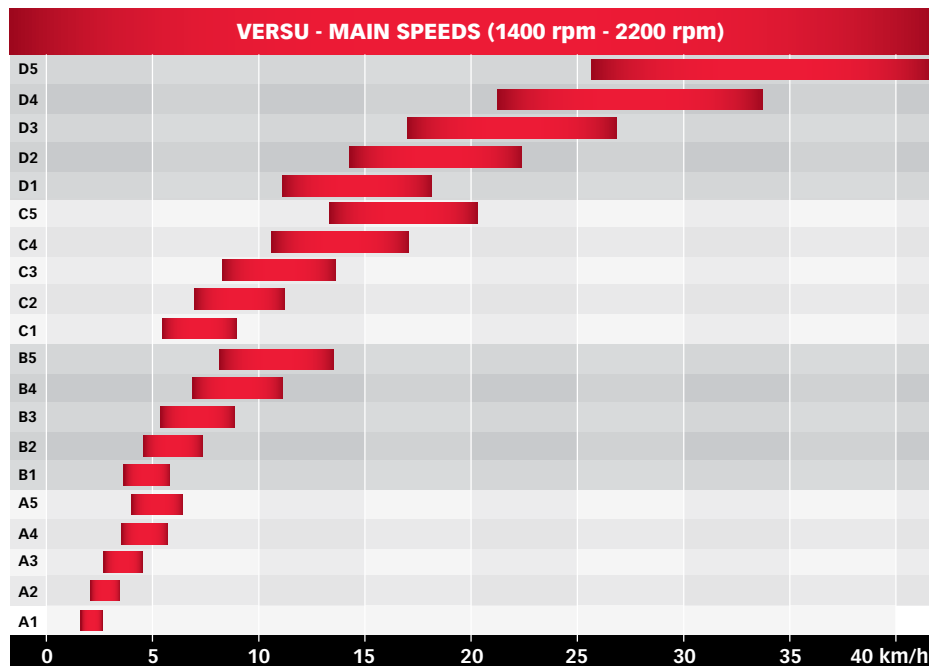
Driving with comfort

Valtra Versu tractors have been designed above all to make it possible to work long days efficiently. The automated transmission and assisted brakes make driving easy. The five powershift speeds in each of the 6 speed ranges give you an impressive 30 speeds in both directions. Versu and Direct gearboxes are also equipped with an option to allow the tractor to shift automatically between ranges C and D. This reduces the requirement on the driver to monitor which range or gear is required. This function can be quickly disabled if required.

Gear and range changes are all controlled with just three buttons on the patented, ergonomic Valtra ARM driver's armrest - independent of your working direction.

ARMREST - UNIQUE DESIGN

- › Controls for powershift, U-Pilot, cruise control, hydraulics and linkage are ideally located
- › Armrest can be raised, lowered and adjusted to suit each operator
- › Grab rail for stability and extra grip in rough terrain
- › Ergonomic design for increased operator comfort



Automatic functions	Description
Automatic shifting - Mode 1	Factory set gear changes for general driving situations
Automatic shifting - Mode 2	User defined gear changes for specific tasks
Automatic shifting - C / D ranges	Automatically changes between C and D ranges to reduce requirement on operator
Shuttle Pre-Programming	Allows a different forward/reverse gear to be programmed so that this is automatically selected when the shuttle is operated
Engine Speed Cruise Control 1 & 2	Engine revs are electronically adjusted to maintain a set rpm
Drive Speed Cruise Control	Pre-programmable target speeds
AutoTraction	Allows clutch-less start and stop for repetitive tasks, such as round bailing
4WD Shuttling Automatics	Automatic engagement of 4WD for a set time when setting off
Diff Lock Automatics	Automatic engagement of 4WD when required
Flexible Idle Speed 1200 > 650 rpm	Lower engine speed when shuttle in P position to save fuel. Increased idle speed if needed for catalyst cooling



Direct 2.0: N143 and N163 (CVT)

A revolutionary Valtra design

Valtra Direct offers new levels of user-friendliness for the most demanding tasks. The stepless transmission on Direct models has been designed and manufactured from start to finish by Valtra with respect for Valtra's values and the individuality appreciated by our customers in a way that only Valtra knows how. The stepless transmission on all Direct models has been designed to work faultlessly in the most demanding of work and weather conditions.

Unlike other CVT transmissions, Valtra have designed and manufactured, in house, a four range CVT transmission. The benefits of this allow the user to set the transmission to efficiently transfer the maximum amount of torque and power for the job in hand, in turn increasing performance, reducing fuel consumption, and increasing the lifetime of an already proven, reliable transmission. With four ranges, the operator can find the optimum range for individual tasks and for changing conditions.

1. TRANSMISSION DROOP SETTING

The transmission droop setting determines how sensitive the transmission system is to changes in engine load.

Turning the potentiometer anti-clockwise gives priority to the engine rpm. When the machine is working under load, the transmission ratio will automatically adjust to maintain engine rpm. In practical terms, this setting maintains power delivery. If the potentiometer is turned clockwise, then priority is given to the transmission ratio. The engine will automatically reduce rpm, whilst still maintaining the most economical transmission ratio. In practical terms, this increases fuel economy. The transmission droop settings allows the driver to choose between power and economy. Leave the potentiometer in the middle position, and the tractor will function with a normal mix of power and fuel economy.

2. SPEED BALANCE, FORWARD/REVERSE

When the potentiometer is in the middle position, the speeds in both forward and reverse are equal (100%). Turning the potentiometer clockwise reduces the driving speed in reverse by 10 to 90 percent, and turning anticlockwise reduces the driving speed forwards accordingly. This function can be used when extremely slow speeds are required (down to 0,01 km/h) or when manoeuvring at headlands.

3. ENGINE BRAKING CONTROL

Switch between three positions: low, normal and high. The high setting is recommended for slippery conditions, for example on snow or ice.

4. TRANSMISSION MODE SELECTION

Automatic mode is the default. Manual mode is engaged via the terminal.



Four work areas: A, B, C and D. Two operating modes: automatic and manual

WORK AREA A

0-9 KM/H

Extremely high pulling power for small and precise speeds. Direct models are also available with ground speed PTO, offering optimal pulling power with trailers.

WORK AREA B

0-18 KM/H

Universal range for heavy pulling tasks, such as heavy tillage, harvesting and transporting in the forest.

WORK AREA C

0-27 KM/H

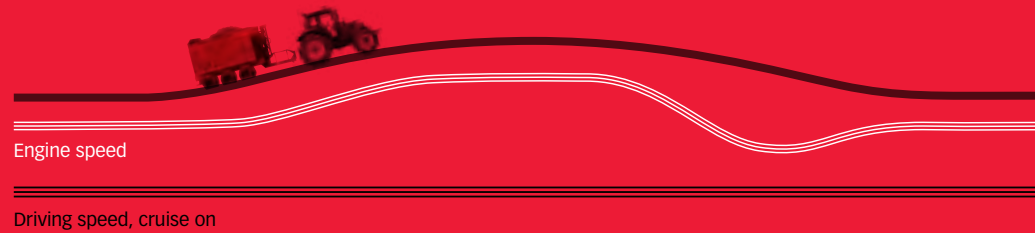
Ideal range for transporting on fields or in demanding conditions. Suitable also for a wide range of field tasks that require power.

WORK AREA D: ROAD TRANSPORT

0-50 KM/H

For general transport use when high pulling power is not required. Suitable for transporting and high speeds.

AUTOMATIC MODE



Automatic mode is optimal for most operations in the field and on the road. Automatic mode uses the highest possible transmission ratio to optimise fuel use.

MANUAL MODE



Manual mode can be selected in A and B work areas. The transmission ratio is controlled solely by driver using the CVT lever. Suitable especially for harvesting tasks that require specific speeds for different conditions and crops.





Hydraulics

HiTech

HYDRAULICS IN HITECH MODELS

HiTech models have an open centre hydraulic system. The transmission and hydraulics share the same oil. The system is protected with pressure and return filters. The pump output is either 73 or 90 l/min at 2200 rpm. Maximum output is either 20 or 25 kW and the maximum pressure is 196 bar. The maximum amount of oil for external use is either 30 litres or 40 litres with additional fill for the transmission.

HiTech models come standard with two adjustable hydraulic valves (single or double acting operation). The first valve can be locked for continuous pumping, while the second valve has a floating position. All valves are controlled directly by lever without joints or transmissions.

Two additional valves at the rear and a flow control for the first valve (standard on 90 l/min versions) are available as an option.

In addition, two electronically controlled front valves can be specified. These valves are controlled using the joystick on the driver's armrest and can be used to operate the front loader, for example.

N SERIES – THE IDEAL LOADER TRACTOR

Approximately half of all N Series tractors are delivered to customers with a factory-fitted front loader. On HiTech models, instead of a joystick control a simple mechanical control is available.

On the new N Series models N113 - N163, the redesigned chassis and reinforced structure are combined with new loader brackets. The brackets are attached directly to the frame and do not require additional support structures. They also do not limit the turning radius. As a front-loader tractor, the new N Series is up to 16% more agile than older models.

- › HiTech models can be specified with electronic front-loader hydraulics
- › The lifting power on N93 and N103 models is 53 kN or optionally 77 kN
- › The lifting power on N113 models is 58 kN or optionally 77 kN, which is standard on N123 and N143 HiTech models
- › The lower links on N93 - N113 models are either telescopic or Ball Hitch. Ball Hitch lower links are standard on models starting with the N123. The multi-adjustable side limiters are either traditional pin-locked or optionally automatically locked in the upper position

Hydraulics

Versu and Direct

On Versu and Direct models, transmission and hydraulics have separate oils. Up to 40 litres of the hydraulic oil can be used externally when the tank is filled with 58 litres of oil (47 litres with 65 litres in the tank). The pump is an axial piston type with a maximum output of 115 l/min. A 160 l/min high output pump is available as an option. Up to 9 work hydraulic valves are available: four at the rear, three fully-adjustable valves at the front, and two fixed flow valves at the rear. A Power Beyond implement coupling can also be specified as an option.

With the 160 l/min high output pump, the temperature of the transmission and hydraulic oils are balanced using a heat exchange system that not only cools the hydraulic oil but also transfers heat the other way when needed to ensure that the hydraulics are not too cold in winter conditions.

The new N Series also features a fully redesigned integrated front linkage. The lifting force and lifting range of the front linkage have been further increased; 35 kN of lifting force is now available 60cm out from the linkage arm connection point.

The N Series is specified with the appropriate towing equipment for each market. Instead of a standard Nordic hitch, a telescopic hydraulic hitch is available, making it exceptionally easy to attach a trailer.

All hitches can also be equipped with a K80 ball hitch that allows secure trailer attachment. This both increases driving comfort and decreases wear

- › Joystick controls both front and rear 1 and 2 valves
- › Versu and Direct models available with two pairs of quick couplings
- › Pivoting front linkage and automatic Valtra LH Link available as an option on Versu and Direct models
- › All N Series models come with an electronic Autocontrol rear linkage with an exceptionally wide lifting area. Drive Balance Control (link arm suspension) is also standard on all N Series models
- › The rear lift capacity on Versu and Direct models is 8.1 tonnes





Control the hydraulics from the Valtra ARM driver's armrest on Versu and Direct models

All of the electronic valves can be pre-programmed from the tractor terminal, satisfying the functional demands of even the newest tractor-implement combinations. Such versatile and adjustable implement hydraulics cannot be found on any other tractor in this size class.

FUNCTIONS:

- › 4 positions (including a floating position)
- › Flow control for each valve block, including three presets: 10%, 50% or 100% of maximum flow. At smaller flows the floating positions can be activated at the same time, making it easier to attach implements
- › Programmable operating time from 1 to 60 seconds, or select continuous flow
- › Valves can also operate with single actions without separate settings
- › Float function quickly and easily puts all valves in float

The operator can store three valve settings (M1, M2 and M3) for use with different implements. In addition, the U-Pilot system can be used to store hydraulic settings for specific implements



HITECH 5



Catp
32

VERSU / DIRECT





Cab

VALTRA'S CABS REFLECT OUR NORDIC PHILOSOPHY

Valtra cabs are built specifically to be spacious, ergonomic and safe for the driver. The cab on the N Series is by far the most spacious in its size class, yet it still offers excellent visibility through its tinted windows. Large doors make it easy to climb in and out of the cab. For ease of cleaning, the cab also features a flat floor. Three sturdy steps lead up to the cab, and the fuel tank has been designed to keep mud off the steps.

The doors are large and open wide with the aid of gas cylinders. The door handles are easy to grab. The doors have metal frames and greased hinges.

The cab is large enough to allow the standard 180-degree rotating seat to swivel easily. Excellent visibility is ensured by 5.7 square metres of glass. Valtra's own TwinTrac reverse drive system is available as an option.

Valtra's continuous work on lowering noise levels in the cab has paid dividends. The engine, transmission, hydraulics, chassis, cab suspension, insulation materials and other details have all been honed to create a truly quiet environment of less than 70 dBa.

There are two heating units, one in the roof and the other beneath the instrument panel, guaranteeing a comfortable temperature in even the coldest conditions. The lower heating unit has two speeds, while the roof unit has four. The roof unit has vents in six directions, covering all the windows. The air-conditioning unit is also in the roof, and its components have been further improved to provide optimal working conditions. Automatic climate control is available as an option on models N113 - N163.

Cab suspension

THE CAB SUSPENSION HAS BEEN DESIGNED TO WORK EITHER SEPARATELY FROM OR TOGETHER WITH THE FRONT SUSPENSION

With cab suspension, the front attachments of the cab work like flexible hinges, while the rear can move up to 100 mm in relation to the rear axle. The suspension elements are coil springs, while a panhard rod prevents any lateral movement of the cab.

Both the driver's seat and the optional passenger seat have a seatbelt fitted as standard.



CAB SUSPENSION



VALTRA ARM DRIVER'S ARMREST AND MAIN CONTROLS

1. Display terminal
2. Hydraulics F/R
3. Hydraulic flow presets/ operators own settings
4. 3rd and 4th service valves for implement operation when fitted with a loader.
5. Joystick for controlling either front or rear valves (or a mix of both), front loader or front linkage.
6. Hydraulics on/off
7. Buttons for menu operations, hydraulics & transmission
8. U-Pilot play/pause
9. Cruise speed + / range or gear change +
10. Cruise speed - / range or gear change -
11. Cruise speed preset
12. U-Pilot stop
13. Cruise off
14. Cruise speed preset 2
15. Rear linkage transport/ stop/working
16. Float / fast soil engagement
17. Rear linkage depth control
18. CVT lever
19. PTO engagement
20. Additional hydraulic services
21. Hand rail
22. FWD engagement

Valtra ARM

– a brand new control terminal

In Versu and Direct models, the transmission and hydraulics are controlled from the Valtra ARM driver's armrest

The driver's armrest is used to control the main functions of the load-sensing hydraulics. The integrated tractor terminal is used for entering settings for the hydraulic valves, transmission and U-Pilot.

The Valtra instrument panel is stylish and easy to read. There are analogue dials for fuel level, engine temperature and engine speed (rpm). The Proline dials which come as standard on Versu and Direct models also feature an analogue speedometer on the right hand side. The large screen in the middle can display a wide range of optional information, as well as operating hours and a clock at all times.

The Valtra ARM driver's armrest is available on N Series Versu and Direct models. The controls on the armrest are customised for each model Series, but the basic functions are the same, making it easy for drivers to switch between Valtra tractors. The armrest has a sturdy grab handle that offers excellent support for making precision adjustments of the hydraulics. It also provides additional support on rough terrain and makes it easy to lift the armrest.

The red lever in front of the grab handle is used on Versu models as a hand throttle and on Direct models as a CVT lever to reduce speed in tight places. It can also be used to adjust the transmission's ratios when driving in manual.

THE SCREEN IS CLEAR WITHOUT REFLECTION

- › Day and night settings with different colours
- › Editing is now even easier using the pulse wheel
- › Three memory locations for individual transmission settings
- › Factory settings can be restored easily
- › Cruise control settings are retained even after restarting the engine

Trip computers for tasks now more user friendly

- › Select how you want to calculate these

Easier to engage the hydraulics

- › When 10% flow is selected from encoder, floating position is activated as well

More information at a glance

- › Cruise settings displayed together with the drive settings

New and improved U-Pilot

- › Only the name remains the same (see page 37)





U-Pilot

Much more than a headland turning system

A totally new U-Pilot is a standard feature in Versu and Direct models. With the new U-Pilot you are not only able to automate cyclic functions but also to set and save hydraulic settings for different implements or operators. By using U-Pilot the operator can concentrate on the implement and its operations instead of controlling the functions.

Also changing implements is much faster and easier when you have all the settings stored in U-Pilot. Just connect the implement and choose the right hydraulic settings and function sequences from the U-Pilot memory. Easy and productive.

Sequences can be recorded in the field or built manually when the tractor is stationary. Furthermore, sequences can be edited or changed allowing the user to tailor or edit a sequence to exactly how they want it.

NEW U-PILOT

- › Two Play buttons in the armrest – one for going into work and the other for coming out of work
- › Hydraulics can be controlled with U-Pilot
- › Hydraulic settings stored for each implement
- › Up to 30 implements can be stored
- › Editor function

U-PILOT EDITOR

- › Edit hydraulic settings
- › Edit transmission settings
- › Editing mode activates automatically when U-Pilot turned on
- › Trip computer settings

TwinTrac

Work in both directions - increased productivity with reduced operator fatigue

TwinTrac is not just a piece of optional equipment but a complete tractor that has been designed to work in both directions.

The system includes duplicate controls in the rear of the cab, including an extra steering wheel and forward-reverse shuttle, plus accelerator, clutch and brake pedals. In Versu and Direct models, the Valtra ARM driver's armrest brings all the controls to the rear of the cab when the seat is rotated.

When working in reverse, visibility of the implement and working area is excellent. Many implements also work better in front of the tractor and especially the tractor's wheels. The large cab provides an ideal working environment when working in reverse.

TwinTrac enhances versatility while taking nothing away from the tractor's other excellent properties.

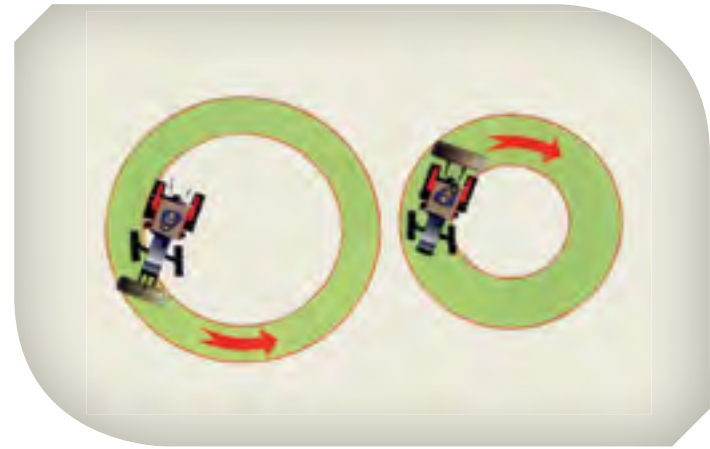
Note that the rear of the tractor also has all hydraulic operations, linkage position adjustment and a multispeed PTO.

TWINTRAC - THE MOWING MACHINE

Statistics prove the efficiency of working in reverse. Accordingly, working with a TwinTrac combination improves productivity by 10 to 30 percent compared to working in the forward direction using a butterfly combination. The more irregular the shape of the land, and the more headland turns that are required, the greater is the advantage of working in reverse. Fuel consumption is also correspondingly lower through reduced operating times.

VALTRA LH LINK

Available on Versu and Direct models, the LH Link allows the linkage to turn in the desired amount with the front wheels, making it easy to mow around corners without missing anything. The pivoting of the front linkage can be controlled either manually or automatically - for mowing tasks the automatic option is superior.





Auto-Steering and Isobus

The third generation N Series is an excellent range for versatile use that meets customer requirements in whichever segment he or she is working. Versu and Direct models can be factory fitted with either Auto-Guide 3000 automatic steering or system readiness.

THE BENEFITS OF AUTO-STEERING

- › Reduces overlap and underlap
- › Saves fuel and time
- › Reduces use of seeds, fertilisers, pesticides and other input costs
- › Reduces weed growth by improving herbicide application
- › Saves the environment by streamlining use of fertilisers and pesticides
- › Permits accurate operation in darkness, fog and dust
- › Allows driver to focus on using the implement
- › Reduces driver fatigue
- › Speeds up work
- › Eliminates the need for tramlines or a row marker system
- › Reduces soil compaction by standardising same driving lines
- › Allows data to be stored for precision farming and traceability
- › RTK accuracy available (+/- 2cm)





AGCOMMAND

Your complete fleet management solution

AGCOMMAND

All N Series models can be fitted with AGCOMMAND telemetry system. It records the movements and work performed to a central internet based server. From the server it is possible to view the tractor and its functions (from the tractor can-bus), as well as its in-field performance. Viewing is possible at all times and performance data can be easily found by selecting the appropriate date parameters.

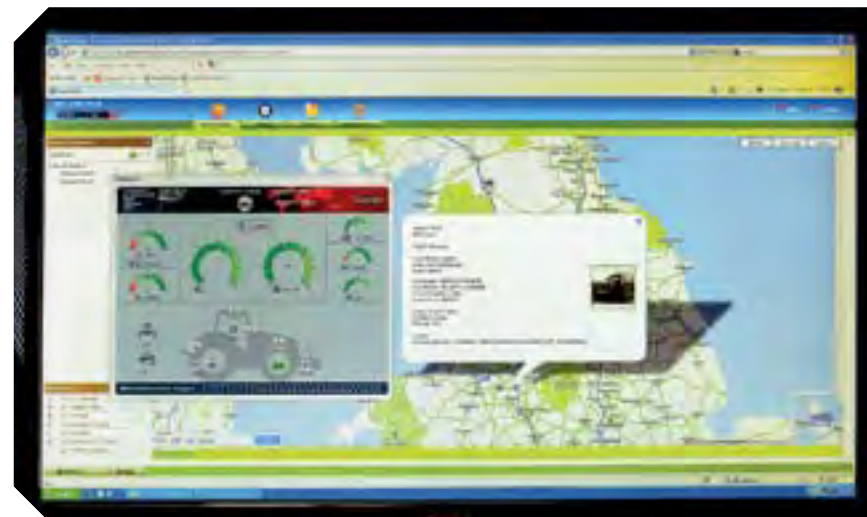
Fleet owners and contractors can easily monitor their machinery via AGCOMMAND - both in near real time and from historic records. The precision is good enough even to record work done in separate areas of the field.

AGCOMMAND can be accessed by the machine's owner from any computer with internet access. The tractor data is transmitted from the tractor to a server via a GSM-network.

Service schedules can also be set to alert the owner when a machine is due to be serviced. This can also be monitored by your local dealer to reduce downtime.

CUSTOMERS APPRECIATE THE MANY BENEFITS OF AGCOMMAND:

- › Near real-time access to important machine data
- › Increased machine and operator productivity
- › Availability of important vehicle health information to help insure maximum uptime
- › E-mail or text message alarms in case of abnormal machine activity
- › Easy scheduling and management of vehicle maintenance
- › Fully automatic data recording and transfer



Forest and municipal tasks

FOREST CAB

Valtra offers the option of a forestry cab, featuring a protective cage around the roof and roof windows at the back of the cab. The upper windows are made from polycarbonate, while the rear glass and rear side glass can be either tempered glass or shock resistant polycarbonate. The corner of the lower window has been designed to allow tidy cabling into the cab.

SIDE VISIBILITY CAB, SVC

The Valtra side visibility cab (SVC) has been designed to improve efficiency and safety in work where good visibility is required close to the tractor. Unimpeded visibility is required especially

when working in tight places in municipal and farm tasks, as well as in the forest. The new SVC cab further enhances the versatility of your Valtra tractor in a unique new way.

The new SVC360 cab (Side visibility cab + forest roof) offers excellent visibility to the right side of the tractor, upwards and upwards to the rear. The SVC360 cab improves working conditions for all tasks requiring excellent visibility. The SVC360 cab is unique on the market, offering unrivalled visibility in all directions. And only Valtra offers the SVC360 cab combined with the TwinTrac reverse-drive system. Together these features create unmatched work efficiency – regardless of which direction you are working in.

All Valtra cabs are FOPS & ROPS approved.





Valtra service and training

The Valtra Training Centre at the Suolahti factory in Finland is responsible for the training of our international servicing and spare parts personnel. Centralised training ensures high-quality and consistent servicing, as well as a rapid flow of information from our customers to the entire Valtra organisation.

The Valtra Spare Parts Centre prepares all servicing, repair and spare parts manuals. Valtra literature, including our user manuals, represents the very best in the tractor industry. Valtra's modern and efficient centralised spare parts system delivers fast and guaranteed parts and service support. Within Europe parts can be delivered within 24 hours. In many regions our spare parts service operates 24 hours a day. The Valtra N Series is simple and straightforward to

service and maintain. The change intervals for the engine, transmission and hydraulics oils are long, and changing the oil is easy to do. The N Series has been designed to provide easy access to the cooling system, air cleaner, oil and fuel filters. The engine cover lifts vertically to facilitate maintenance. The cooling system can also be opened separately for cleaning. All of these aspects are a benefit to our customers in all regions and climates.





AGCO Parts

and Valtra customer service

To ensure reliable and uninterrupted running of an N Series tractor, only fluids that have been specially designed for it should be used. Look for the labels "Valtra Genuine Spare Parts" or "AGCO Parts" on product packaging. The same parts are used for new Valtra tractors.

SERVICE KITS

Valtra offers convenient ready-prepared service kits for 100-hour, 500-hour and 1000-hour services. These kits include all necessary original parts, guaranteeing quality and results. Using original parts helps ensure your safety.

VALTRA PREMIUMCARE

Custom made service and extended warranty plans covering up to 5 years/6000 hours are available from your Valtra dealer.

FINANCE SOLUTIONS

To help fund your farm machinery purchases, AGCO Finance offers a choice of dedicated retail finance options, specifically tailored to the agricultural environment.



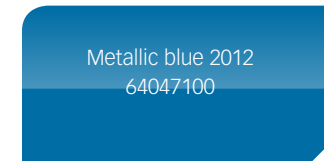
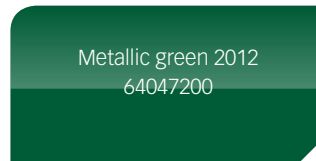
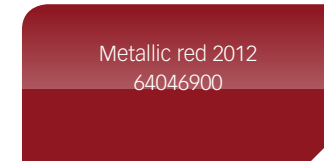
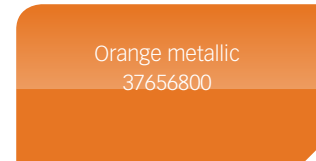
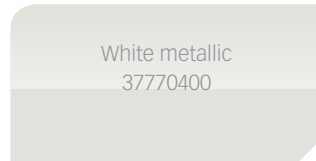
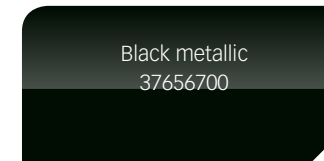
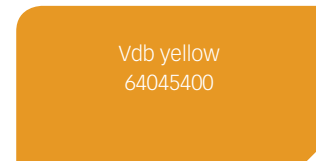
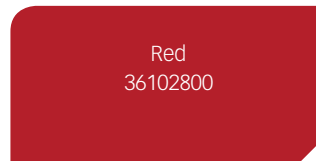
Colours



Valtra is the only tractor manufacturer in the world producing tractors in a range of colours. In 2008, the Valtra colour line celebrated its 20th anniversary.

As Valtra tractors are tailor-made to the customers wishes you can also choose the colour of the tractor yourself. The standard colour options available are red, metallic red, metallic green, metallic blue, metallic black, metallic orange, metallic silver, metallic white and yellow.

The colours on this page are matched as accurately as possible to the actual paint colours used. Due to print processes, we cannot guarantee that colours shown are 100% accurate.



N Series technical specifications

MODELS	HITECH					HITECH 5				VERSU		DIRECT	
	N93	N103	N113	N123	N143	N93	N103	N113	N123	N143	N163	N143	N163
ENGINE													
AGCO POWER	33AWI		44AWI		49AWI	33AWI		44AWI		49AWI		49AWI	
Number of cylinders/capacity, l	3 / 3.3		4 / 4.4		4 / 4.9	3 / 3.3		4 / 4.4		4 / 4.9		4 / 4.9	
POWER HP/KW/2000R/MIN (ISO 14396)													
Max power, hp (kW)	99 (73)	111 (82)	124 (91)	135 (99)	152 (112)	99 (73)	111 (82)	124 (91)	135 (99)	152 (112)	163 (120)	152 (112)	163 (120)
Max power, transport boost, hp (kW)	-	-	130 (96)	143 (105)	160 (118)	-	-	130 (96)	143 (105)	160 (118)	171 (126)	160 (118)	171 (126)
TORQUE NM/1500 R/MIN													
Max torque, Nm	430	465	510	540	600	430	465	510	540	600	650	600	650
Max torque, transport boost, Nm	-	-	530	560	650	-	-	530	560	650	700	650	700
TRANSMISSION													
Type	Three-step powershift					Five-step powershift				Five-step powershift		Stepless CVT	
Number of gears *)	24+24R (36+36R)					20+20R (30+30R)				30+30R		4 ranges	
Std speeds min-max, km/h *)	3,6 - 40 (0,6 - 40)**					3,6 - 40 (0,8 - 40)**				0,8 - 40**		0 - 40 (50)	
PTO (TWO SPEED)													
540, engine r/min	1874					1874				1874		1874	
540e, engine r/min	1539					1539				1539		1539	
1000, engine r/min	2000					2000				2000		2000	
Ground speed PTO	option					option				option		option	
Front PTO	-	-	option			-	-	option		option		option	
HYDRAULICS													
Max pump output, l/min	73	73 (90)				73	73 (90)			115 (160)		115 (160)	
Max number of valves rear	4					4				4		4	
Max number of valves front	2					2				3		3	
POWERLIFT													
Max lift power, kN	53 (77)	58 (77)	77			53 (77)	58 (77)	77		81	81		
Front lift (option) lift power, kN	28	35				28	35			35	35		
MEASURES AND WEIGHTS													
Tyres	460 / 85R38 + 380 / 85R28					460 / 85R38 + 380 / 85R28				520 / 85R38 + 420 / 85R28			
Wheelbase, mm	2533	2665				2533	2665			2665	2665		
Lenght, mm	4329	4664				4329	4664			4664	4664		
Width, mm	2538					2538				2538		2538	
Height, mm	2875					2875				2945		2945	
Turning radius, m	4,5					4,5				4,75		4,75	
Ground clearance rear, mm	480					480				500		500	
WEIGHT													
Without extra weight, kg	4700	5200				4700	5200			5450	5600	5450	5600
Fuel tank, l	220	230				220	230			230	230		
Adblue-tank, l	-	27				-	27			27	27		

*) Creeper gears **) Models N123-N143 and N163 Versu also possible EcoSpeed (40 km/h reduced engine revs. 1750 r/min) or 1 - 50 km/h version.

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VAL 1843 03/13-3k

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