

**VALTRA**

Individually Yours

# Valtra N Series

HiTech / HiTech 5 / Versu / Direct

99 - 171 HP







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99 - 171 HP

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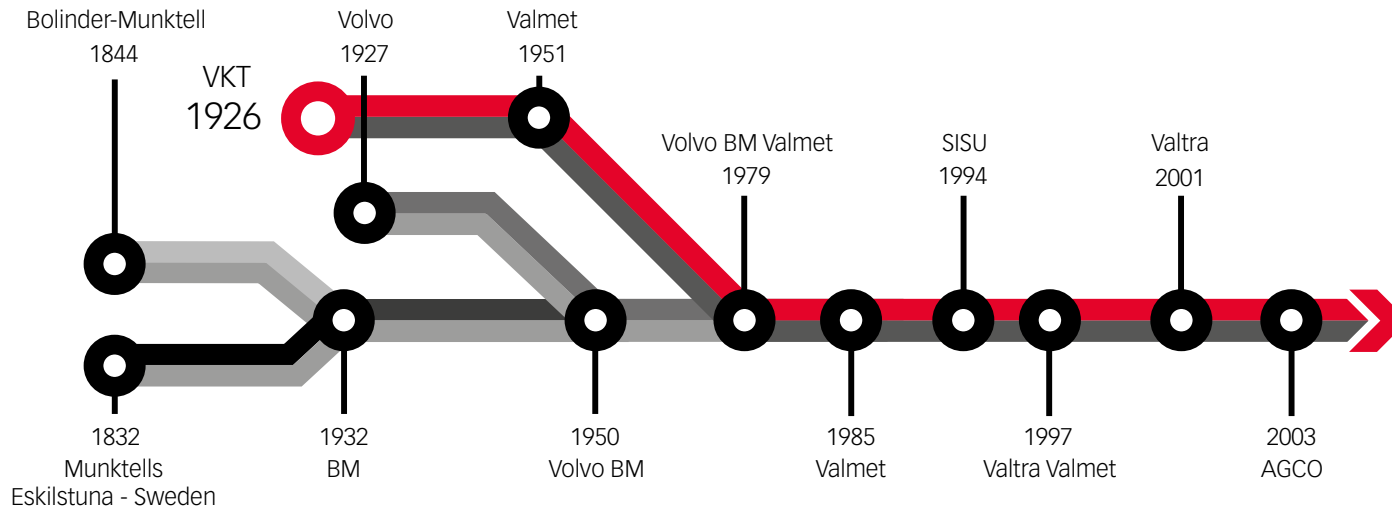
# Worldwide Valtra

The company's roots date back to 1951, when the former "Valmet" weapons manufacturer was enlisted for civilian purposes and produced the first Valmet 20 tractor. Since then, Valmet has undergone huge change and development; not just in its name changes from Valmet and ValtraValmet to Valtra, but also in its vastly increased tractor series with a performance range from 55 to 400 HP.

Valtra tractors are built in the most advanced factories in the industry at Suolahti, Finland, and Mogi das Cruzes, Brazil. Valtra tractors

are now sold in over 75 countries worldwide. Valtra is a worldwide brand of the AGCO Corporation, the third-largest manufacturer of agricultural equipment in the world.

Today, Valtra is synonymous with a reliable, high-quality product that is tailored to meet the individual needs of every customer and business. The quality and reliability are no coincidence: only the best quality materials are used in the manufacturing process. The majority of Valtra components are designed in-house.







# Demand more from your tractor

Introducing Valtra Unlimited, a completely new way of specifying your own individual tractor. Everything you want, just the way you like them, factory fitted. Valtra tractors have a proven reputation for reliability. Whatever conditions you use your tractor in, and whatever tasks you use your tractor for, we are ready to respond to your needs. Now when you order your new tractor, you can get it from the factory ready fitted with all the features you want.

Even though Valtra's customers get their tractors tailor-made according to their individual specifications on the assembly line, some equipment cannot be fitted during the normal assembly process. Some equipment is simply too big or specialised. Don't worry, even in these cases Valtra has a solution.

The new Valtra Unlimited customising studio has been opened beside the assembly line at the Suolahti factory in Finland. A specialised team has been trained to fit the kinds of equipment that cannot be fitted on the assembly line.

The team members are experts in Valtra tractors and processes, ensuring that each tractor is delivered on time without delays. The Valtra Unlimited team can also call on all the expertise right next to them in the factory.

The Valtra Unlimited customising studio can create tractors that are ideally specified for road maintenance, for example. After all the specialised equipment has been fitted, the tractor undergoes final inspection at the factory to oversee quality and that everything functions as intended. Since all the equipment is fitted at the factory, Valtra's spare parts service can provide all the parts needed during the installation. Tractors that have been tailor-made by the Valtra Unlimited team can be identified by the special Valtra Unlimited logo and steering wheel hub. Note, that Unlimited customizing is only available to Suolahti products.

The Valtra experts at the tractor factory are the best in the business.





**N 163**

**Unlimited**











It's all about attitude

# N Series 99 - 111 hp

*The two new N Series models N93 and N103 are ready to change your attitude. Our long innovative history with AGCO Power has once again proved its success. The new three-cylinder engine is economical choice for you who are looking for practical power. The agility of these two models is overwhelming. New hood design gives you excellent visibility and makes front loader work easy and safe. On top of that we are introducing the new 5-step powershift transmission with user interface that has no equal. The practical, clear Nordic design is ergonomic and simple to use.*

*These characteristics make N93 and N103 the best in their class. Come and tailor your new Valtra.*



# New design – optimum visibility

The new N93 and N103 models have a new front-end frame design with an integrated front lift as an option. It has longer lifting range as in previous models and similar construction to four cylinder N-models. The lifting power is 28 kN. On the new N Series models the engine hood and every-

thing under it has been re-designed. The wheel-base is 2533 mm, which is 1,5 mm shorter than on previous N82 and N92 models. The new features also include HiTech 5 transmission, new transmission user interface and booster brakes on HiTech 5's.



## Wide choice of cab options

Cab options	93, 103 HiTech	93, 103 HiTech 5
Cab suspension		•
SVC Cab	•	•
Forest cab	•	•
TwinTrac		•
Rear accelerator	•	•
Air conditioning	•	•
Heated rear window	•	•
AgCommand ready	•	•



## Highlights

**Tailoring your new tractor is the most economical solution, you have the power to choose**

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





# Easy to use effective

## HiTech 5 and powerful hydraulics

HiTech 5 is a new 5-step power shift 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 power shift steps. The transmission has no gear levers: four robotized main gears shift with electronic control. With AutoTraction, Automatic Powershift and optional cruise control the tractor is as close to CVT as possible for a power shift tractor. Creeper and ground speed PTO are optional in all models.

The original three step powershift transmission with 24+24R or with 36 + 36R speeds is the well proven base transmission in the N series, from model N93 up to N143

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

[Read more about Hitech 5 in page 23](#)









# New 33AWI engine

## Compact powerhouse meets the tight emission regulations

Valtra's new lower hp end of the N-series is having a totally new type of engine from Agco Power (Finland). The three cylinder engine has gain a good reputation in A HiTech series as well as in other Agco machinery. Now with further development not only the emission control, but as well the user friendliness have reached a new level.

New engine is called 33AWI, where A stand 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 1900 r/min. These relative low revs provide modern engine characteristics even into 100 hp class. That results low fuel consumption and effective operation.

The new engines meet the exhaust norms with a combination of Diesel Oxidation Catalyst

(DOC) and cooled exhaust gas recirculation (EGR). The new solution requires no particle filter but still the particle mass is lowered by 15-30 % and CO and HC emissions even by 90 %. Compared to N-series stage 3B -tractors with Selective catalytic reduction and four cylinder engine, 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!

Common rail fuel injection system is new generation, offering up to 1600 bar injection pressure and extreme precision. EGR as such requires a quite much of cooling capacity, but still the engine hood size is extremely compact giving the operator good visibility. A viscous fan is fitted to keep the efficiency high.



### Engine, AGCO POWER

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







Productivity demands versatility

# N Series 124 - 163 hp

*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, encouraging 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, this is why contractors like Valtra tractors.*

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 unprecedentedly good fuel economy thanks to SCR engine technology that complies with the latest emissions regulations (3B).

The new N Series has been designed as a general-purpose European tractor. The compact four-cylinder design and power range up to 171 horsepower offers 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 basic design re-

mains 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 front linkage and front-loader adapter, the new N Series is in fact significantly more agile than previous models.









# Four ways to success



## 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

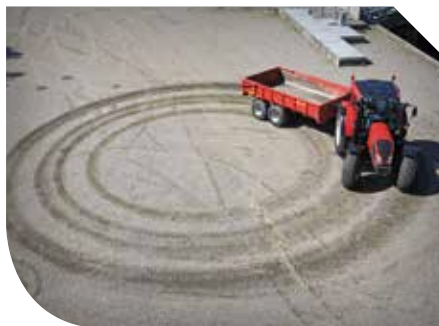
Model	Engine, AGCO POWER		Transmission				Turbine clutch (option)
	Type	Max power, hp STD / boost	HiTech	HiTech 5	Versu	Direct	
Valtra N113	44AWI / 4V	124 / 130	•	•			•
Valtra N123	44AWI / 4V	135 / 143	•	•			•
Valtra N123	49AWI / 4V	135 / 143			•	•	
Valtra N143	49AWI / 4V	152 / 160	•		•	•	
Valtra N163	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 also been expanded by 100 mm – which in turn enhances stability

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



55 %



# 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.*

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 lot of power at low revs, which improves fuel economy and towing power while reducing noise levels. Electronic engine also enables versatile cruise controls.

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



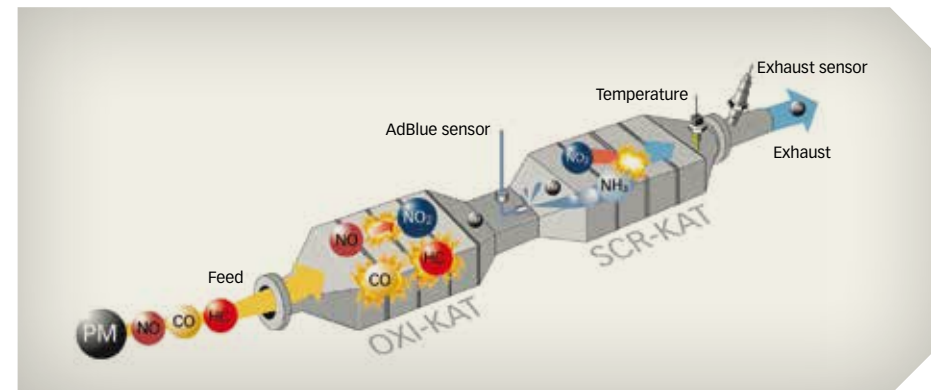




### N SERIES ENGINE IN A NUTSHELL

- › 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 N113 & N123) and 49 AWI (4.9l models N143 & N163)
- › More stringent emissions regulations have led to significant advances in engine technology, also for tractors. SCR technology has now been introduced also on the Valtra N Series
- › SCR technology helps clean exhaust emissions by using a urea-water solution (AdBlue)
- › By eliminating harmful nitrogen oxide emissions by 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 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





# Four ways to put power into practice

HiTech / HiTech 5 / Versu / Direct





## HiTech 5

# User-friendly powershift transmission

- › Five-shift powershift (128 % speed range from steps 1 to 5)
- › 20+20R speeds, 30+30R with optional creeper gears
- › Automated shifting of main gear – no gear lever
- › Easy to use (changing speed could not be easier, but the driver is still in control at all times) – four main gears and five-step powershift
- › Available with HiTrol turbine clutch (N93-N123)
- › AutoTraction (STD), Cruise Control (Option)
- › The most flexible and easy-to-use transmission you can get
- › Available in N103-N123 models
- › Max hydraulic pump output of 90 l/min is optionally available
- › The original Valtra HiTech three step powershift remains in selection

### TURBINE CLUTCH



### AUTOTRACTION



## Both Valtra's three-step and five-step powershift offer the same high-quality features and options.

In automatic gears 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 gas 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 so wanted.

### HiTrol

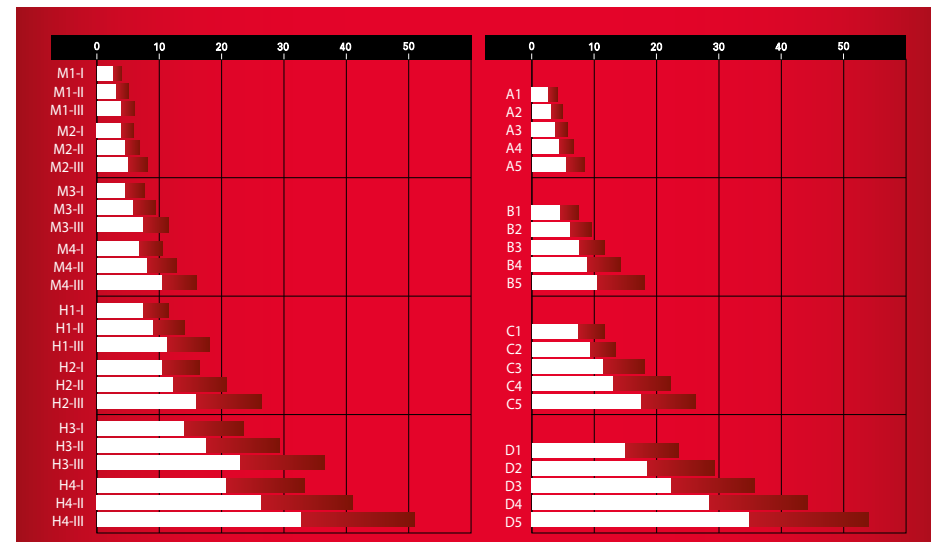
The turbine clutch is a unique Valtra feature. This fluid clutch has a pump wheel and a turbine wheel that can rotate freely relative to each other. As the engine speed increases the oil flow created by the pump wheel causes the turbine wheel to rotate. When the engine is idling, little or no power is transmitted. The power transfer begins

from around 1000 rpm, and at 1400 rpm nearly all power is transferred. The maintenance-free turbine clutch offers truly stepless starting off, which facilitates front-loader work and connecting implements in particular.

### 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 20 km/h. The drive automatically re-engages when the brakes are released 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.

### HITTECH AND HITTECH 5 SPEED CHART (WITHOUT CREEPER)





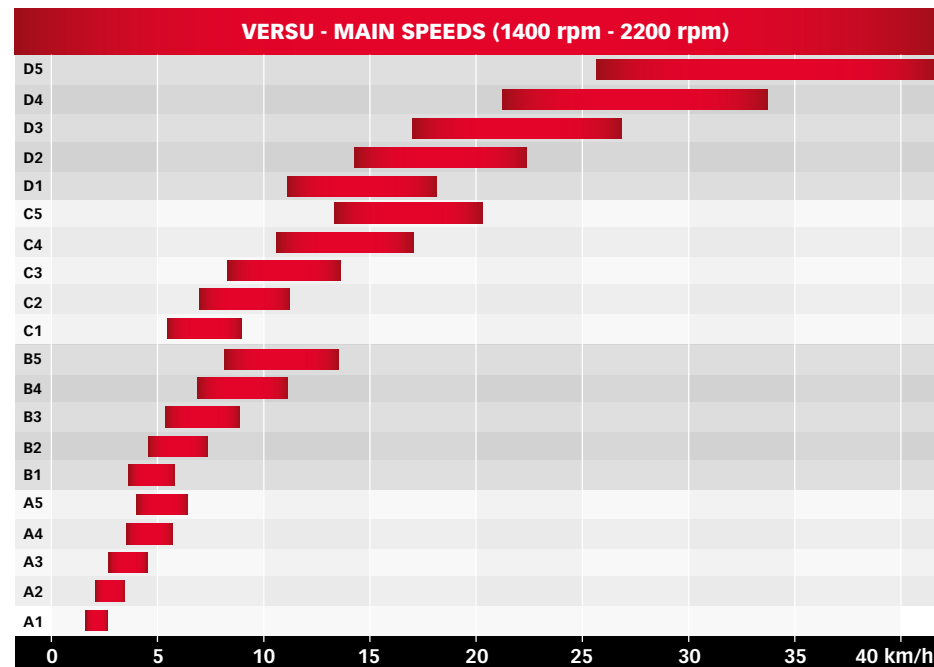
## Versu N143 and N163

# 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. Even easier is the automatic function between the C and D driving ranges. So you have just the right speed for any kind of field or transport work. Everything is in here but the gear shift lever. Now you control the power transmission with only 3 shift buttons on the patented, ergonomic Valtra Armrest - independent of your working direction.

### ARMREST – UNIQUE DESIGN

- › Extra grip in rough terrain
- › Armrest can be raised when rotating the seat
- › Enhanced stability grip when using controls for hand throttle, hydraulics and power lift
- › Controls for powershift, U-Pilot, cruise control, hydraulics, and powerlift are ideally located



Automatic functions	Description
Automatic shifting, Mode 1	Factory setting for stress-free driving with good efficiency
Automatic shifting, Mode 2	Adjustable shifting automatics for customised needs
Automatic shifting C / D ranges	Gives access to automated shifting for all road speeds
Shuttle pre-programming	Increases efficiency for repeated shuttle operations
Engine speed memory	Easy to adjust for PTO-use
Cruise Control 1 & 2 Drive speed	Key to stress-free control of driving speed
AutoTraction	Easiest solution for stop-and-go operations
4WD shuttling automatics	Avoid slip on 2WD operations
4WD automatics	Operation of 4WD efficient with no load on driver
Diff lock automatics	Operation of diff locks efficient with no load on driver
Flexible Idle speed 1200 > 650 rpm	Lower engine idle speed when shuttle lever in P position, increased idle speed if needed for catalyst cooling







## Direct 2.0, N123D, N143D and N163D

# Stepless power

*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. In other words, the stepless transmission on Direct models has been made both for northern cold as well as for southern heat.*

*Valtra CVT transmission has gone through major improvements. We have listened to our customers and made changes to improve the total performance of the transmission in many aspects including hardware and software. It is why we are now introducing the new generation of the Direct models, that we call Direct 2.0.*

### 1. CHOOSE THE TRANSMISSION'S SENSITIVITY

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 sacrifices some power, but increases fuel economy. The transmission droop settings allows the "hands-on" type of driver to choose between extreme power and extreme

economy. Leave the potentiometer in the middle position, and the tractor will function with a normal mix of power and fuel economy.

### 2. ADJUST SPEED

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. Can also be used when extreme slow speeds down to 0,01 km/h are needed.

### 3. CONTROL ENGINE BRAKING

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





# Four work areas: maximized pulling power and efficiency

Automatic mode is optimal in most operations

## 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

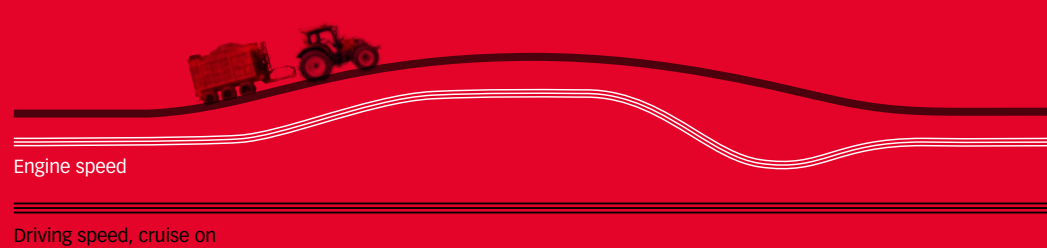
Ideal range for transporting on fields or in demanding conditions. Suitable also for a wide range of field tasks that require power.

## 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.









# Versatile hydraulics

## HiTech

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 cables.

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 TRACTOR FOR FRONT-LOADING TASKS**

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

On the new N Series models N113-N163, the redesigned chassis and reinforced structure are combined with new loader brackets to make an even better front-loader tractor. 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 also be specified with electronic front-loader hydraulics



# State of art hydraulics and user interface

## Versu and Direct

The 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 front linkage that is strong enough for any implement. The lifting force and lifting range of the front linkage have been further increased; 35 kN of lifting force is now available 60 cm out from the linkage arm connection point.

The N Series is specified with the appropriate towing equipment for each market. Instead of a std Nordic hitch, a hydraulic hitch is available that moves in and out, making it exceptionally easy to attach a trailer.

Both Central European and Nordic towing equipment can also be equipped with a K80 ball hitch that allows secure trailer attachment. This both increases driving comfort and decreases wear

- › 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 is also standard on all N Series models







## Total control with Valtra ARM

*In Versu and Direct, the 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
- › Set the operating time from 1 to 60 seconds, or select continuous flow
- › Valves can also operate with single actions without separate settings

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 settings for specific implements.





HITECH 5



Cat  
32

VERSU / DIRECT







# Valtra cab: spacious and quiet

Valtra's cabs reflect our Nordic design philosophy. The 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. Designed for versatile use, 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. The 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.

In HiTech cabs the transmission and hydraulics are operated with a traditional lever. The optional driver's armrest has been designed for controlling front loaders.



# The right conditions for long working days

There are two heating units, one in the roof and the other beneath the instrument panel (optional), 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 air-conditioning is available as an option on models N113-N163.

## **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.

Note also the Optional monitor attachment a sturdy iron rod on either side of the B pillar on the right side of the cab.

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

## **CAB SUSPENSION**



# Valtra ARM

– with new tractor terminal

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

## VALTRA ARM FUNCTIONAL AREAS:

- A** Terminal
- B** Working hydraulics control
- C** Transmission and headland management
- D** Power lift control
- E** CVT-lever (Direct) or hand throttle (Versu)
- F** Hand rail

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 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 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 Ver-su and Direct models. With the new U-Pilot you are able not only to automatize cyclic functions but also to set and save hydraulic settings for different implements or operators. By using the 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.

### **OVERWHELMING HEADLAND MANAGEMENT**

- › Two Play buttons in the armrest – headland turns inside / outside
- › Own memory locations for hydraulics used with U-Pilot
- › Hydraulic settings stored for each implement
- › Up to 30 implements can be named
- › Editor function

### **EASY TO EDIT – ALSO WHILE THE TRACTOR IS STANDING STILL**

- › Hydraulic settings
- › Transmission settings
- › Editing mode activates automatically according to the situation
- › Split screen
- › Trip computer settings



# TwinTrac

## Work in both directions

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 gas, 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.

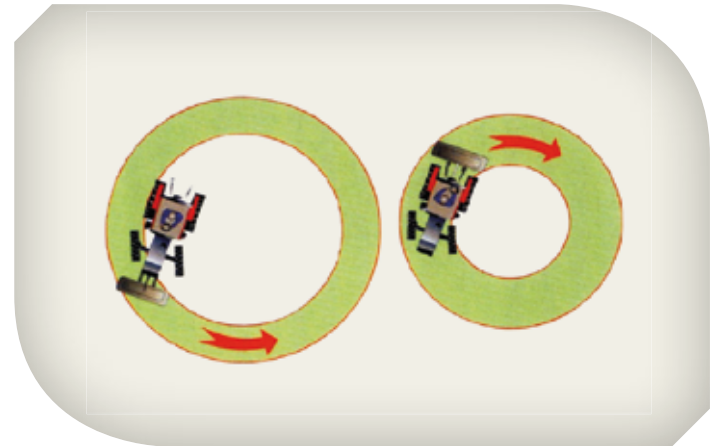
When working in reverse, visibility of the implement and working area is excellent. Many implements also work better in front of the tractor and especially the tractor's wheels. The large cab provides an ideal working environment, also when working in reverse.

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 with 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.



### 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.







# The Fused Farm

Our goal is to make sure that our solutions enable your seeds and yields to grow, year after year.

Fuse Technologies brings a promise that connects products together like never before.

It is a commitment to customers to provide solutions that optimize, coordinate and seamlessly connect their equipment and their farm.

It demonstrates that by giving growers the right tools, solutions and support, they can farm smarter.



## AutoGuide 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 complete fully automatic steering or readiness.

### VALTRA WITH AUTOGUIDE 3000 OFFERS YOU

- › Reduces overlap and underlap
- › Saves fuel and time
- › Reduces use of seeds, fertilisers and pesticides
- › 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





## AgCommand

All N Series models can be fitted with AgCommand telemetry system. It records the movements and work performed by tractor to a central internet based server. From the server it is possible to track the tractor and its functions (from the tractor can-bus), as well as its in-field performance. Tracking 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 tractor to server via a GSM-network.

### **STAY ALWAYS ON TOP OF THINGS WITH 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





# Valtra performs also in the forests and on open roads

## 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

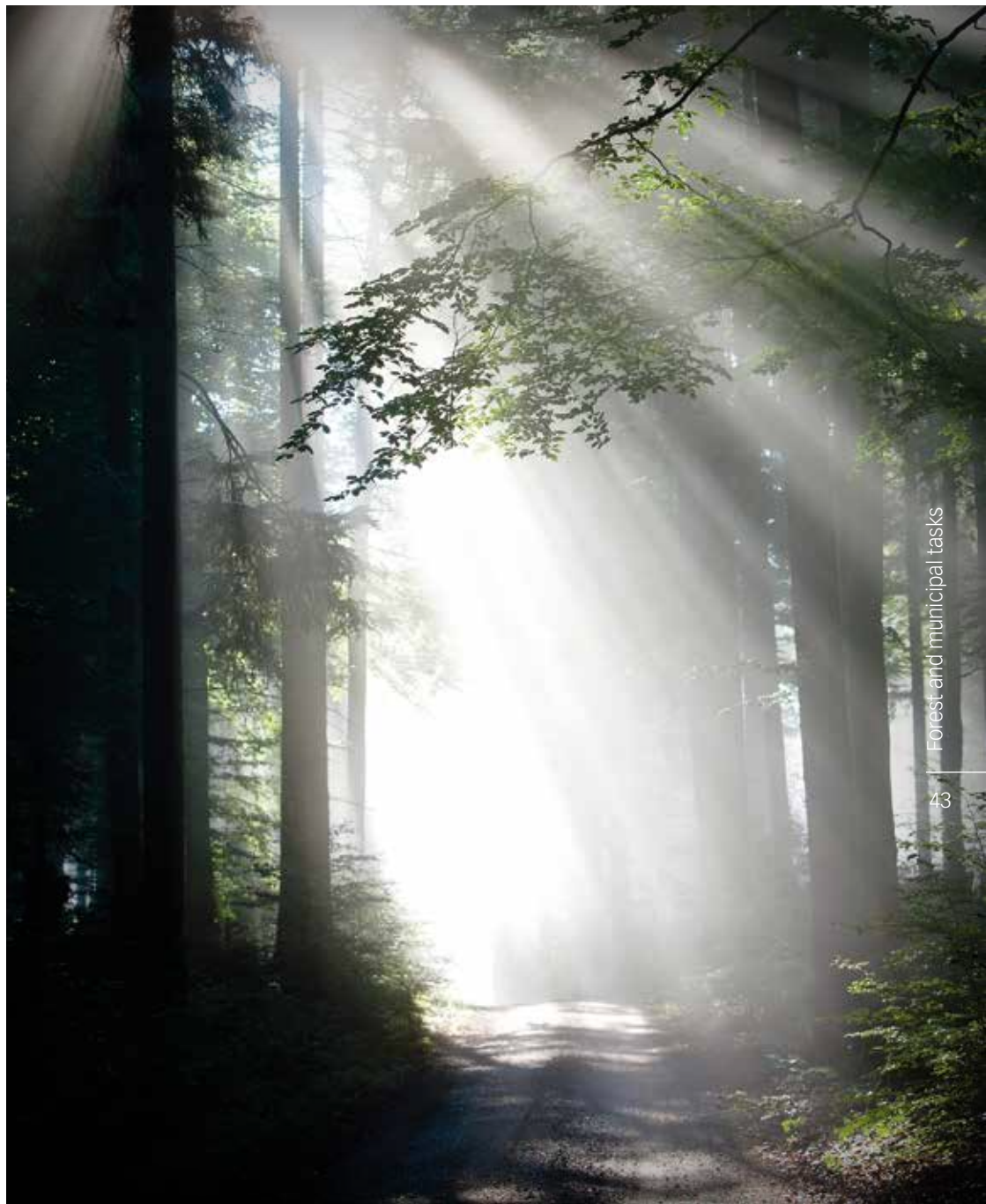
The Valtra side visibility cab (SVC) has been designed to improve efficiency and safety in work where good visibility is required close to the tractor. Unimpeded visibility is required especially when working in tight places in municipal and farm tasks, as well as in the forest. The new SVC cab further 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 main-

tain. 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.



### **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.



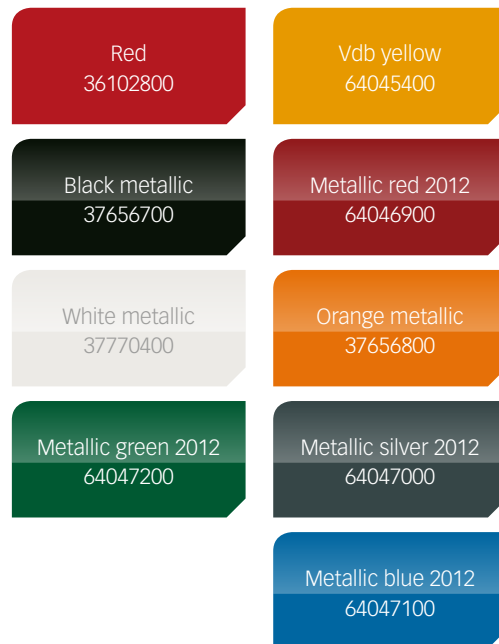


# Colours

Valtra is the only tractor manufacturer in the world producing tractors in different colours. In 2008, the Valtra colour line celebrates 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, black, orange, metallic steel grey 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.



AGCO, Your Agriculture Company, is a premier manufacturer of agricultural equipment, providing high-tech solutions for professional farmers feeding the world. The company is dedicated to delivering superior customer service, innovation and quality. AGCO products are distributed in more than 140 countries worldwide.

## N Series technical specifications

MODEL	N93	N103	N103.4	N113	N123	N143
	HiTech	HiTech	HiTech	HiTech	HiTech	HiTech
<b>ENGINE, AGCO POWER</b>	33AWI	33AWI	44AWI	44AWI	44AWI	49AWI
Number of cylinders/capacity/l	3/3.3	3/3.3	4/4.4	4/4.4	4/4.4	4/4.9
<b>POWER (ISO 14396)</b>						
Max power, kW/hp/rpm	73/99/2000	82/111/2000	82/111/2000	91/124/2000	99/135/2000	112/152/2000
Max power, transport boost, kW/hp/rpm	-	-	89/121/2000	96/130/2000	105/143/2000	118/160/2000
<b>TORQUE</b>						
Max torque, Nm/rpm	430/1600	465/1600	460/1500	510/1500	540/1500	600/1500
Max torque, transport boost, Nm/rpm	-	-	490/1500	530/1500	560/1500	650/1500
<b>TRANSMISSION</b>	3PS	3PS	3PS	3PS	3PS	3PS
Number of gears *	24+24R (26+36R)					
Std speeds min-max, km/h **	3.5-40	3.5-40	3.6-40 (0.6-40)		0.6-50 ***	0.6-50 ***
HiTrol	option	option	option	option	option	
<b>PTO (TWO SPEED)</b>						
540 engine, r/min	1874	1874	1874	1874	1874	1874
540e engine, r/min	1539	1539	1539	1539	1539	1539
1000 engine, r/min	2000	2000	2000	2000	2000	2000
Ground speed PTO	option	option	option	option	option	option
Front PTO	-	-	option	option	option	option
<b>HYDRAULICS</b>						
Max pump output, l/min	73	73 (90)	73 (90)	73 (90)	73 (90)	73 (90)
Max number of valves rear	4	4	4	4	4	4
Max number of valves front	2	2	2	2	2	2
Hydraulic oil for implement, l	30	30	30/40	30/40	30/40	30/40
<b>POWERLIFT</b>						
Max lift power, kN	53 (77)	53 (77)	58 (77)	58 (77)	77	77
Front lift (option) lift power, kN	28	28	35	35	35	35
<b>MEASURES AND WEIGHTS</b>						
Tyres	420/85R38+340/85R28			460/85R38+380/85R28		
Wheelbase, mm	2533	2533	2665	2665	2665	2665
Length, mm	4329	4329	4436	4664	4664	4664
Width, mm	2538	2538	2550	2538	2538	2538
Height, mm	2875	2875	2875	2875	2875	2875
Turning radius, m	4.5	4.5	4.5	4.5	4.5	4.5
Ground clearance rear, mm	480	480	480	480	480	480
Without extra weight, kg	4700	4700	5020	5020	5050	5050
Fuel tank, l	220	220	230	230	230	230
Adblue-tank, l	-	-	27	27	27	27

\* incl. creeper speeds (option) \*\* max. speed depending on country specific legislation

\*\*\* also available as EcoSpeed (40 km/h with reduced engine speed 1750 r/min) or 1-50 km/h version.

MODEL	N93	N103	N103.4	N113	N123	N123	N143	N163	N123	N143	N163
	HiTech 5	HiTech 5	HiTech 5	HiTech 5	HiTech 5	Versu	Versu	Versu	Direct	Direct	Direct
<b>ENGINE, AGCO POWER</b>	33AWI	33AWI	44AWI	44AWI	44AWI	49AWI	49AWI	49AWI	49AWI	49AWI	49AWI
Number of cylinders/capacity/l	3/3.3	3/3.3	4/4.4	4/4.4	4/4.4	4/4.9	4/4.9	4/4.9	4/4.9	4/4.9	4/4.9
<b>POWER (ISO 14396)</b>											
Max power, kW/hp/rpm	73/99/2000	82/111/2000	82/111/2000	91/124/2000	99/135/2000	99/135/1900	112/152/1900	120/163/1900	99/135/1900	112/152/1900	120/163/1900
Max power, transport boost, kW/hp/rpm	-	-	89/121/2000	96/130/2000	105/143/2000	105/143/1900	118/160/1900	126/171/1900	105/143/1900	118/160/1900	126/171/1900
<b>TORQUE</b>											
Max torque, Nm/rpm	430/1500	465/1600	460/1500	510/1500	540/1500	540/1500	600/1500	650/1500	540/1500	600/1500	650/1500
Max torque, transport boost, Nm/rpm	-	-	490/1500	530/1500	560/1500	560/1500	650/1500	700/1500	560/1500	650/1500	700/1500
<b>TRANSMISSION</b>	5PS	5PS	5PS	5PS	5PS	Versu	Versu	Versu	Direct	Direct	Direct
Number of gears *			20+20R (30+30R)			30+30R	30+30R	30+30R	CVT	CVT	CVT
Std speeds min-max **	3.5-40	3.5-40	3.6-40 (0.8-40)	3.6-40 (0.8-40)	0.8-50 ***	0.8-50 ***	0.8-50 ***	0.8-50 ***	0-50	0-50	0-50
HiTrol	option	option	option	option	option						
<b>PTO (TWO SPEED)</b>											
540, engine r/min	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874	1874
540e, engine r/min	1539	1539	1539	1539	1539	1539	1539	1539	1539	1539	1539
1000, engine r/min	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Ground speed PTO	option	option	option	option	option	option	option	option	option	option	option
Front PTO	-	-	option	option	option	option	option	option	option	option	option
<b>HYDRAULICS</b>											
Max pump output, l/min	73 (90)	73 (90)	73 (90)	73 (90)	73 (90)	115 (160)	115 (160)	115 (160)	115 (160)	115 (160)	115 (160)
Max number of valves rear	4	4	4	4	4	4	4	4	4	4	4
Max number of valves front	2	2	2	2	2	3	3	3	3	3	3
Hydraulic oil for implement, l	30	30	30/40	30/40	30/40	40/47	40/47	40/47	40/47	40/47	40/47
<b>POWERLIFT</b>											
Max lift power, kN	53 (77)	53 (77)	58 (77)	58 (77)	77	81	81	81	81	81	81
Front lift (option) lift power, kN	28	28	35	35	35	35	35	35	35	35	35
<b>MEASURES AND WEIGHTS</b>											
Tyres	420/85R38+340/85R28			460/85R38+380/85R28		520/85R38+420/85R28			520/85R38+420/85R28		
Wheelbase, mm	2533	2533	2665	2665	2665	2665	2665	2665	2665	2665	2665
Length, mm	4329	4329	4436	4664	4664	4664	4664	4664	4664	4664	4664
Width, mm	2538	2538	2550	2538	2538	2538	2538	2538	2538	2538	2538
Height, mm	2875	2875	2875	2875	2875	2945	2945	2945	2945	2945	2945
Turning radius, m	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Ground clearance rear, mm	480	480	480	480	480	500	500	500	500	500	500
Without extra weight, kg	4700	4700	5020	5020	5070	5450	5450	5600	5450	5450	5600
Fuel tank, l	220	220	230	230	230	230	230	230	230	230	230
Adblue-tank, l	-	-	27	27	27	27	27	27	27	27	27

\* incl. creeper speeds (option) \*\* max. speed depending on country specific legislation

\*\*\* also available as EcoSpeed (40 km/h with reduced engine speed 1750 r/min) or 1-50 km/h version.



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Maanostointisto Ilme Oy 10 / 2013 Kopijvä

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