

Valtra Team

CUSTOMER MAGAZINE 1 | 2012

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NEW VALTRA N163

**THE MOST POWERFUL
FOUR-CYLINDER TRACTOR
IN THE WORLD** page 6

EDITORIAL



Valtra in UK for TWENTY YEARS

This year Valtra and before that Valmet has been operating directly in the UK for twenty years. Back in 1992 annual sales were measured in hand-fuls and reports lumped us with 'others'. Today, with a wider range of tractors than ever before, an expanding dealer network and sales force, Valtra sales are reported under the Valtra name. Interestingly, the latest set of figures available from the UK Agricultural Engineers Association – those for 2010 – showed that while total industry sales fell in that year Valtra were in a unique position; selling both an increasing number and improving their market penetration in percentage terms from 3.8 % in 2009 to 4.5 % in 2010. Why? I believe part of the answer is in the following pages – reliability. Valtra customers are not only remaining loyal to Valtra, they also keep tractors on the farm longer, finding they do not suffer from expensive breakdowns as a result and while industry figures are not yet available we know that through 2011 Valtra sales have continued the 2010 trend and grown.

This spring we ran a series of Valtra Experience road shows, visiting a Valtra dealer near you and while these are mostly over why not contact your dealer; he may be holding a late event. If you're contemplating a tractor change, try out a Valtra. Your nearest dealer telephone number is on our web site www.valtra.co.uk Simply follow links to Dealer Locator and click on the map or, call our office 02476 851202. You will not be disappointed.

Mark Broom
NATIONAL SALES MANAGER



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Valtra supplies the right tyres for the intended tasks.



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Individual

FOREST TRACTORS

Valtra offers a wide range factory-fitted forestry features, such as a forestry cab, reverse-drive system, reinforced fuel tank, polycarbonate glass, forestry tyres, narrow rear mudguards and a turbine clutch.

In addition to these regular features, many forestry tractors are further customised to meet customer wishes. These vary from country to country. For example, in Scandinavia forestry tractors are mostly used to transport cut-to-length wood out of the forest, whereas in Southern Europe mulching the forest base is often the main task.

One German customer has customised his T162 into a skidding tractor. The company Otzberger fitted a heavy-duty Epsilon skid steer loader, an S+R winch mechanism and an HBC remote control system. For road work this forestry tractor has a factory-fitted stepless transmission, plus front axle and cab suspension.

- Epsilon skid steer loader
- S+R winch mechanism
- Forestry cab

News



The N113 HiTech tractor was customised with 6478 fingerprints and signatures. The tractor has been on display at fairs throughout the winter and spring.

6478 ways to aid Africa

Visitors to the Valtra stand at Agritechnica had the chance to use their creativity and help Africa at the same time. The centrepiece of the stand was the new N113 HiTech tractor, which visitors could customise by adding their fingerprints and signatures in paint. Almost 6500 people took the opportunity to leave their mark.

The tractor will now be sold at the Ritchie Bros. auctions in Meppen, Germany, on 24 May. Bids can be made during the auction itself and also via the internet during the month before the auction. The aim is to raise money to support agriculture in Africa.

The proceeds will go towards a new A93 HiTech tractor, technical training and other material for the Weiveld Agriculture School in South Africa. The school offers studies in agriculture, technology, hotel and restaurant management, and data processing to approximately 600 students. Co-operation between the local Valtra importer and the school will continue after the donation has been made. •

A DESIGN COMPETITION FOR CUSTOMERS

Valtra is organising a tractor design competition together with the publications Koneviesti (Finland), Bedre Gardsdrift (Norway), Jordbruksaktuellt (Sweden) and Maskinbladet (Denmark).

Participants are invited to present their ideas about how to improve today's tractors. The two best ideas from each country will be invited as guests to the Valtra Engineering Centre along with representatives of the publications.

Based on the proposals received, Valtra will design a concept tractor that will be presented next autumn. All the submissions should be sent to the publications. Valtra will be entitled to use the ideas without further compensation.

VALTRA WINS RED DOT DESIGN AWARD

The ANTS concept tractor, unveiled by Valtra to mark its 60th anniversary, has won the prestigious red dot design award following ANTS victory in the mobility category of the design concept series.

Red dot is the largest design competition in the world. In addition to the Valtra ANTS concept tractor, over 3500 entries participated in the design competition this year.



reddot design award
winner 2011

PARTICIPANTS IN READER SURVEY RECEIVE GIFTS

In the last edition of Valtra Team we asked for your opinions about the magazine. The results of the survey have been processed and analysed. Everyone who participated in the online survey has been sent a small gift.

Internet: valtra.co.uk

Valtra Team

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

Edition Tommi Pitenius, Valtra Inc., tommy.pitenius@agcocorp.com

Editorial Bogdan Rachwal, AGCO Sp. z.o.o., bogdan.rachwal@valtra.com // Siegfried Aigner, Valtra GesmbH, siegfried.aigner@valtra.com //

Sylvain Mislange, AGCO Distr. SAS, sylvainmislange@fr.agcocorp.com // Lucy Jones, Agco Ltd., lucyjones@uk.agcocorp.com //

Kim Pedersen, LMB Danmark A/S, kim.pedersen@lmb.dk // Astrid Zollikofer, AGCO Deutschland GmbH, GB Valtra, astrid.zollikofer@valtra.com

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Valtra is a worldwide brand of AGCO

Valtra

THE BEST OVERALL

TEXT ROGER THOMAS PHOTOS VALTRA ARCHIVE

We all know how emotive arguments about the best tractor, best overall, best jacket can get, particularly amongst younger people. Well now it's as official as it gets – Valtra overalls are the best.

Earlier in the year **James Rickard**, Farmers Guardian machinery reporter gathered together overalls from seven leading tractor manufacturers and gave them a bit of a work out. To quote James; 'Valtra came out on top with an almost perfect fit' and at just £41.00 James' large size overalls were described as; 'practically a steal.'

Read for yourselves what James had to say before investing in another pair of overalls because, like tractors, it's not what they cost to buy that matters. It's what they cost to

own that's really important and while residual value is not likely to enter the equation serviceability, comfort and appearance almost certainly will.

Valtra overalls are available from Valtra dealers along with a wide range of other merchandise.

To see the full range check out www.valtra-shop.com (www.valtra.co.uk) and follow the links to Fun & Downloads and on to Valtra Collection and open the brochure. •



FRIDAY FEBRUARY 24 2012
WWW.FARMERSGUARDIAN.COM

Valtra by Dimex

Custom fit Easy enough	8/10	Protection, warm and practical	7/10
Worn in Like a second skin	10/10	Could benefit from a storm flap	7/10
Quality of material Light, but will stand plenty of punishment	8/10	Has good trouser pocket protection and leg zips enable them to be pulled on over boots	8/10
Quality of finish Very well put together	9/10	Best price - £41 from dealer. Practically a steal	9/10
Pocket design, size, location, etc	9/10	Very cool black and red with high visibility flashes. You could almost pull in them	9/10
Just about spot on. Good positioning and various sizes	9/10	Nearly perfect	9/100
Hardly any restrictions	9/10		



FG verdict

As you can see from the scores, there was a broad range of results. Valtra came out top with an almost perfect fit, while Case IH, Fendt and New Holland came in at respectable positions with their efforts.

However, some were let down by poor fit and quality which could be forgiven if they were not so expensive.

Generally, unless you get them free with a new tractor, you quite often have to pay a premium for branded overalls compared to a generic pair.

Really, you should be getting value for money, but

Brand	Score
Valtra	86
Case IH	81
Fendt	75
New Holland	72
Case	68
John Deere	66
Massey Ferguson	62

some do not deliver this and it is often just the name you are paying for.

We do realise not everyone is the same shape as those doing the testing, and some of these overalls may fit you better than us. Our

advice is to always try before you buy.

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SCR engines for the N Series

N163 – THE MOST POWERFUL FOUR-CYLINDER TRACTOR IN THE WORLD

The Valtra's N Series has entered its third generation and the top models are now the N163 Versu and Direct; the most powerful four-cylinder tractors in the world. In addition, the new engine technology has allowed the front of the N Series machines to be fully redesigned, making it even more user friendly.

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIVE

SCR engine technology reduces fuel consumption by approximately 5–10 percent. Additionally, particulate and nitrogen oxide emissions are reduced to a fraction of that produced by older engine designs. Tractor operators also benefit from the fact that SCR technology reduces engine cooling requirements and keeps the lubrication oil cleaner, extending engine life.

Valtra has years of experience with SCR technology with the Valtra S Series, introduced in 2008, the first agricultural tractor in the world to feature SCR technology. For tractor users SCR technology

is simple to operate; as electronics manage the system. The driver's only task is to fill the AdBlue tank.

Up to 171 horsepower from just four cylinders

New tractor models offer even more power and torque. The Valtra N163 is the most powerful four-cylinder tractor in the world, producing 163 horsepower as standard and up to 171 horsepower with power boost.

The redesigned nose of the tractor improves forward visibility with new high and low beam driving lights improving night time driving, adding to safety. The front of the chassis has been designed to im-

prove the steering angle thus reducing the turning radius considerably. Additionally, the front linkage and loader, being integrated with the tractor nose do not affect the turning radius.

Standard fuel tank capacity has been increased to 230 litres and a protected metal tank is available as an option for forestry operations. N Series longer wheelbase also enhances road driving stability. The five-pillar SVC cab is also available Versu and Direct models in addition to HiTech models. Valtra's new N Series tractors may also be specified with TwinTrac reverse drive system. →



SCR engine technology reduces fuel consumption by approximately 5–10 percent



Versu and Direct models in the new N Series are available with a new factory-fitted Auto-Steering readiness or the complete System 150 Auto-Steering package, which can steer the tractor with an accuracy of just a few centimetres. The factory-fitted AGCOMMAND satellite navigation system is also available, allowing the tractor's location, current task, productivity and servicing requirements to be monitored over the internet.

These latest N Series models represent the third generation of the N Series, and this is denoted by the last number in the model designation. •

VALTRA N SERIES NEW ENGINES

Model	Standard kW/hp/Nm	Boost kW/hp/Nm
HiTech		
N113	91/124/510	96/130/530
N123	99/135/540	105/143/560
N143	112/152/600	118/160/650
HiTech 5		
N113	91/124/510	96/130/530
N123	99/135/540	105/143/560
Versu		
N143	112/152/600	118/160/650
N163	120/163/650	126/171/700
Direct		
N143	112/152/600	118/160/650
N163	120/163/650	126/171/700



HiTech transmission now has a five-step powershift **New transmission option for Valtra N Series**

The third generation of the Valtra N Series has been expanded with the introduction of a new transmission option. The new HiTech 5 transmission features a five-step powershift and mechanical hydraulics and the new transmission will be available on N113 and N123 models.

The new transmission features robotised shifting between the main gears. There is no gear lever. The HiTech 5 transmission offers 20+20 speeds or 30+30 speeds if the creeper gear option is specified. The robotised shifting provides operators with ten consecutive powershift gears.

Operating the new transmission is extremely simple. The cab has just one fixed lever with a button that controls the transmission's functions. The transmission's versatile automated features make the driver's life much easier.

The hydraulics are the same as those on other HiTech models and are controlled by a mechanical lever. A 73-litre/minute hydraulic pump is standard, with a 90-litre pump available as an option. •



Neil Gourley presented with the Farmers Weekly Green Energy Farmer of the Year award 2011 with LR Jane King (editor Farmers Weekly), Andy Adcock of Marks & Spencer, the category sponsor, Matt Baker the event presenter. (pic Mark MacKenzie/Farmers Weekly).



Green Energy

FARMER USES VALTRA

TEXT AND PHOTOS ROGER THOMAS

Driving through Glencairn past Auchencheyne, a 1,900 ha holding run by **Neil and Mary Gourlay**, tourists could think it simply another Scottish farm. Like many of his fellow farmers Neil will assert that he is the custodian of the land in which he lives and works. However, at this point he and Mary differ from many other farmers; they are acting positively to improve the sustainability of their farming company, Auchencheyne Ltd. "Sustainability is paramount and we have looked for and acted on practical ways to reduce our carbon footprint." As a result Neil and Mary have received Farmers Weekly Green Energy Farmer of the Year award.

Five grassland farms make up Auchencheyne Ltd. and Neil will

describe his land as difficult. More officially Auchencheyne is described as marginal to upland supporting beef and sheep enterprises; the 500 commercial suckler cows' progeny are raised as stores, sold on to a couple of lowland specialist finishers to take on to slaughter weight. The farm's 3,200 ewes produce fat lambs which are sold through Scottish Beef to the retail trade – Marks and Spencer. "We do sell a few mules for breeding," adds Neil.

So far, it all sounds fairly conventional so what is different? How did Neil win the Farmers Weekly award?

For a start, the garden shed-like building at the bottom of the farm house garden is in fact a small hydropower scheme fed from a stream originating in the hills above the home farm house producing 12 kW

of electricity. Costing about £70,000 to install using farm labour it is budgeted to pay for itself in eighteen months. A second 11kW hydroelectric scheme makes use of a seven acre lake built by Neil's Victorian predecessors as a reservoir. Costs were similar and payback is expected to take a comparable period. Neil is paid for the electricity he produces and as a result he hasn't had an electricity bill (apart from the standing charge) for some time. This is a serious saving as the central heating system of the very large Victorian farm house is partially powered by electricity. The house, now split into three units; one for Neil and Mary, one for relatives and one a holiday let was previously heated exclusively by an oil fired boiler (there are some solid fuel fires) but now consumption has dropped by over half

to just £2,000 annually. "Remember, it is not only the house that benefits from free electricity, the farm buildings are also included," comments Neil.

Alongside the hydro schemes Auchencheyne also has a small farm financed wind turbine supplying electricity to the farmstead. While this runs efficiently enough Neil plans to replace it with a larger unit producing 330 kW; capable of providing 90 % of the local village's requirements. "I can accept that wind turbines are not for everyone," but as Neil points out, his farms are in one of the windiest areas of the country, "it would be a pity not to utilise it," he comments.

There are also plans for a larger wind farm; planning permission for 23 turbines has been applied for. "Farmers can do quite nicely out of a wind farm deal but, all most of us do is lease the land to turbine owners and generating companies." In some cases representatives of these companies just arrived in the farmyard. "Like a feed sales rep - and until I became involved with one specific company they just kept coming; it was amazing how many."

Farm vehicles have also come under the microscope; a Polaris electric buggy is used for lighter transport duties and the farm's several quad bikes have been converted to dual fuel allowing them to run on LPG which is cheaper and cleaner than both petrol and diesel.

All Valtra fleet

The farm's four tractors are all Valtra; the six cylinder T162 produces 172 hp at just 1,800 rpm and is used for the farm's heavier operations which include hauling a 14 tonne bulk feed trailer to and from a feed mill in Dumfries, some 20 miles distant. "With the Direct transmission the journey's an easy drive," comments driver **Alec Blackstock**. There is also a large flatbed trailer used for bale haulage or, when fitted with a stock body, the transfer of sheep and cattle between the various farms or to market. Other duties for the T162 include some primary cultivations, fertiliser spreading and

spraying. "We've a sat nav system which saves a lot of time not having to set out markers and is very accurate - marvellous. And we could spread or spray in thick fog or the dark," he adds with a grin.

The four cylinder N111, may be operated in either Power or Eco mode and produces either 122 hp at 2,200 rpm or 124 hp at just 1,800 rpm is fitted with a loader. With getting on for 4,000 head of adult livestock on the farm the N111 is often found working in conjunction with the N92 and a diet feeder.

"We've been using Valtra for ten or twelve years now and have been very satisfied with their reliability. I change all three tractors at three years regardless of hours worked and new machines come with a three year extended warranty and service contract," Neil explains. "This may sound a little expensive but it does help budget. I know my machinery costs in advance - no nasty surprises and, as a general rule, residual values are higher with the dealer knowing what services and repairs - if any - have been carried out." Again Neil is adamant. "Yes the tractors are fuel efficient, particularly the Eco models but the sums must add up correctly including any down time - we're in quite a remote spot out here."

There is a fourth Valtra, or more correctly Valmet tractor on the farm is a rather elderly Valmet 900. "Its used by stockmen and I'm not sure of the hours but it performs well and is reliable," says Neil. It may be a stockman's tractor but reliability is important; there can be little worse than trying to work with stock on a remote farm in bad weather, probably on a Sunday - and the tractor packs in far from a replacement." With Neil's approach to sustainable farming would he consider the Valtra dual fuel - diesel and gas powered - tractor currently on trial? Well, that would depend on economics; an answer that underlines his approach to sustainability. It must stand up economically.

Both Neil and his drivers have visited the Valtra factory and were impressed; not only with the pro-



Neil Gourley with the 12 kW hydro generator - one of two systems installed at Auchencheyne with the help of farm labour.



Drivers Alec Blackstock (L) and Ken Hough (R) with three of the farm's four Valtra tractors.

duction standards but also the systems used to reclaim heat and minimise waste; the factory runs a wood chip fired heating system with excess heat piped to the nearby town. "It's these features that matter when building for the future," said **Ken Hough**. Neil Gourley's attitude is obviously rubbing off on his staff. Finally Neil is now fulfilling a long held ambition and erecting a 'carbon negative' house which, on completion will be rented out. Features include a ground source heat pump, solar thermal water heating, a bio-mass boiler and a rainwater harvesting system. The farm will play its part in the building with home grown wool used for insulation.

"It all goes to prove sustainability is possible, I'm sure a green revolution will help keep people in rural communities. The great thing about wind and hydro is that it works well on hill land like ours and will not significantly interfere with food production." •

Enhanced ease of use for HiTech models

NEW HITECH 5 TRANSMISSION

The new HiTech 5 transmission, available on the N Series offers an alternative for customers who are looking for high levels of comfort without the need for particularly powerful hydraulics. The HiTech 5 transmission features a five-step powershift and mechanical hydraulics offering either 73 or 90 l/min of output. There are 20+20R speeds or 30+30R speeds if the creeper gear option is specified.



TEXT TOMMI PITENIUS PHOTO LAURI JOKELA ILLUSTRATION 3DOLLU

The range gear is robotised and shifts extremely quickly. The range gear shifts automatically from C to D range and back when the automatic powershift is engaged. In C range it is possible to work at speeds from 6 to 23 km/h depending on the engine speed and tyres.

The new transmission is also available with many familiar Valtra features. For example, customers can specify a turbine clutch and ground speed PTO. The N Series also has excellent ground clearance, and the belly of the tractor is flat.

The entire powertrain has been designed to be straightforward and cost efficient, as well as comfortable to use.

Even easier to use

In terms of usability, the new transmission far surpasses previous systems. Since the range gear is robotised, there are no gear levers. The cab has only one fixed lever that is ergonomically located and has only three buttons: powershift, range and clutch.

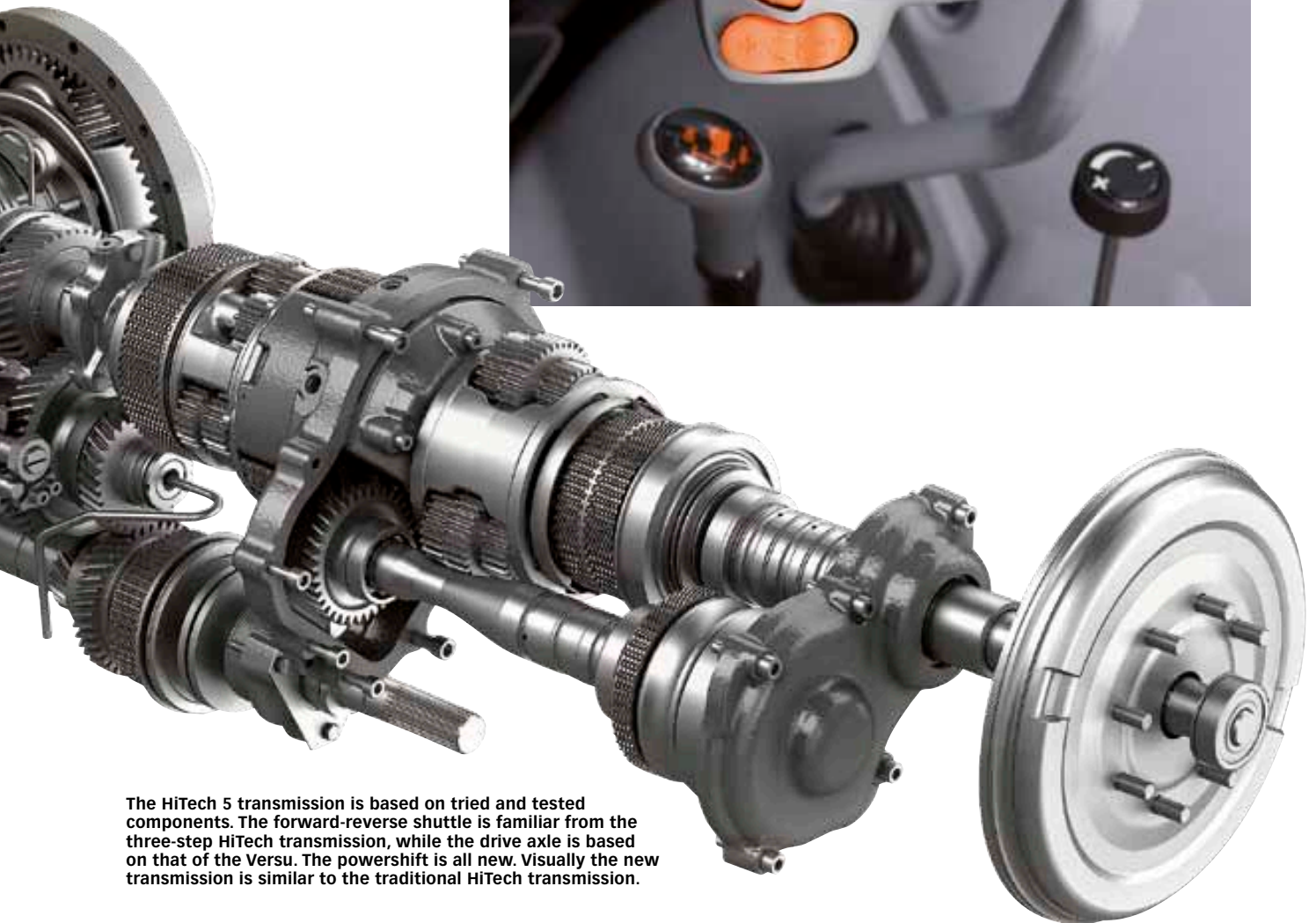
The fixed lever provides a lot of support when driving over bumpy terrain. Operating the powershift is

easy, requiring just the thumb, but it is also possible to grip the lever without changing gears by mistake. The button-controlled clutch is operated with the forefinger and is very convenient, particularly when coming to a stop.

The fixed lever is positioned so that the driver's hand rests on it naturally. If the lever was in the vertical position, the driver would have to hold it, whereas in the horizontal position the hand and arm remain relaxed. The lever leans forward by 30 degrees, so the driver's wrist remains in the most comfortable position. •

The new transmission is also available with many familiar Valtra features.

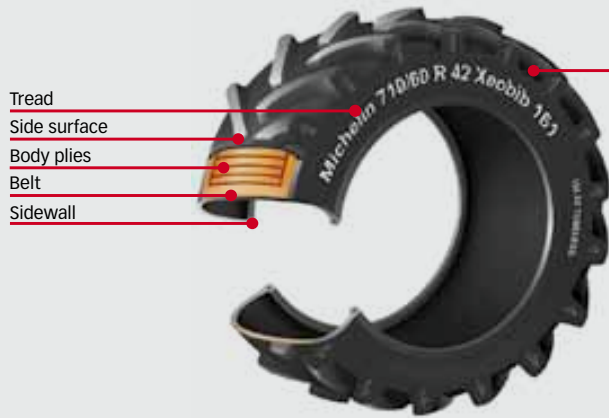
The driver interface is extremely simple. The fixed lever has only three buttons for the powershift, gear range and clutch. The transmission can be programmed using the familiar screen on the A pillar.



The HiTech 5 transmission is based on tried and tested components. The forward-reverse shuttle is familiar from the three-step HiTech transmission, while the drive axle is based on that of the Versu. The powershift is all new. Visually the new transmission is similar to the traditional HiTech transmission.

HITECH 5 TRANSMISSION

Model	Standard kW/hp/Nm	Boost kW/hp/Nm
N113	91/124/510	96/130/530
N123	99/135/540	105/143/560



Sidewall markings (mm) for agricultural tyres

710	Width in millimetres
60	Aspect ratio %
R	Radial ply tyre
42	Rim diameter in inches
XEOBIB	Brand
155	Load capacity index
A8	Speed rating
H	Recommended pressure

Speed markings	
Speed rating	Speed km/h
A1	5
A2	10
A3	15
A4	20
A5	25
A6	30
A7	35
A8	40
B	50
D	65

Weight markings (lci = Load capacity index)							
lci	kg	lci	kg	lci	kg	lci	kg
130	1900	141	2575	152	3550	163	4875
131	1950	142	2650	153	3650	164	5000
132	2000	143	2725	154	3750	165	5150
133	2060	144	2800	155	3875	166	5300
134	2120	145	2900	156	4000	167	5450
135	2180	146	3000	157	4125	168	5600
136	2240	147	3075	158	4250	169	5800
137	2300	148	3150	159	4375	170	6000
138	2360	149	3250	160	4500	171	6150
139	2430	150	3350	161	4625	172	6300
140	2500	151	3450	162	4750	173	6500

Appropriate tyres

STRAIGHT FROM THE FACTORY

TEXT TOMMI PITENIUS PHOTO VALTRA ARCHIVE

Valtra's unique customer order system covers not only tractors but also tyres, allowing each customer to select tyres that are most suitable for the intended task.

"Almost 50 percent of our tyres are Continentals and 40 percent Michelins. The remaining 10 percent are Trelleborgs and Nokian Tyres," says **Tiina Savolainen**, who is in charge of tyres at Valtra.

A wide selection of sizes are available, from narrow tyres for row crop operations to 710 mm turf tyres. Similarly, customers can select from different tread patterns, such as agricultural tyres with lugs or industrial tyres, and construction – cross-ply or radial tyres..

"Almost half of the tractors leave the factory with low profile and

wide 65 and 70 series tyres. Cross-ply and other forestry tractors account for approximately 5 percent of the tyres we supply. Industrial tyres account for around 4 percent," Tiina says.

Tyres often account for 6 to 9 percent of the total price of the tractor. Since it is not possible to combine all the optimal properties in a single tyre, all tyres are a compromise between grip, durability, comfort, speed and ground compaction.

The current trend is towards wider tyres with high speed ratings as road driving is more common and ground compaction is a challenge everywhere. The contact area of radial tyres is around 10 to 15 percent larger than that of similarly sized cross-ply tyres.

Only tyres that have been ap-



proved for specific models are fitted at the factory. When the time comes to change tyres it is important to check tyre specifications in the operator's manual. Professional tyre dealers may also be consulted for technical information such as calculating speed ratios between front and rear tyres. •



The Valmet 465 is the oldest tractor but most recent arrival at Lynch Farm. Stephen Lynch believes there's plenty of trouble free life in it yet.

High hours and reliable

A DORSET FARMERS VIEW OF VALTRA

Stephen and Janice Symes farm around 1,000 Dorset acres with half the land owned, the remainder rented or share farmed.

TEXT AND PHOTOS ROGER THOMAS

Stephen Symes explains. "In recent years neighbours have retired, we've been lucky to absorb their land into Lynch Farm." Lynch is predominantly a livestock farm with 260 milking cows plus followers and a herd of 20 Simmental cows with calves. "The dairy cows calve year round, beef cows between April and October. We keep all dairy calves, heifers as replacements, bull calves finished for beef making the total number of cattle around 850." Additionally Lynch Farm grows 100 acres of feed barley, 30 acres of food wheat and 120 acres of silage maize. Stephen and Janice are assisted by a herdsman, tractor driver

Neil, daughter Jessica and son Sam, recently returned from Brymore School of Rural Technology.

Stephen also assists a contractor with a range of jobs and as a result Lynch Farm runs five tractors: a T121 driven by Neil, an N121 HiTech with loader, "that's my tractor," explains Stephen, a 6750 and a 6550. All the tractors have clocked up high hours for their age: the year old N Series has over 2,000 hours under its belt while the 6550 has given over 18,000 hours of mostly trouble free service. "A bearing gave a minor problem, but at that age I suppose we ought to expect something." A recent addition is a 70 hp Valmet

465 with 5,200 hours on the clock. "It came from a farm sale; Sam drives it most of the time."

Stephen explains his introduction to Valmet and then Valtra. "We were happy with another brand when my brother had a Valmet 6750 on demonstration. Suitably impressed he suggested we try it. The only serious work was ploughing being done by our main six cylinder tractor. With the Valmet having only four cylinders producing 110 hp we thought there would be no chance. How wrong we were! That 6750 handled a heavy plough - no problems."

However, not needing a new tractor immediately, Stephen let subject rest until one of his fleet needed replacing. Local Valtra dealer, C. J. Cox of Bagber, demonstrated an 8150 which Stephen liked and purchased. "That did us well so we traded in our loader tractor and purchased a 2½ year old 6550 with just 2,300 hours. (The 8150 has since been replaced with the T121) Later the 6750 came up at a farm sales and Janice was given a ceiling price. "I bid a bit over, but it's been worth it," She remarks with a wry smile.

What do Lynch Farm's tractors get used for? The answer, just about everything.

Continues on page 21 ...

Valtra has produced two concept tractors that run on biogas: the four-cylinder N101 Dual Fuel and the six-cylinder T133 Dual Fuel, which also features SCR technology for cleaning exhaust emissions.

A large orange and black Valtra tractor is parked in a green field. A driver is visible in the cab. In the foreground, several brown and white spotted cows are grazing. The sky is blue with scattered white clouds.

N101 Dual Fuel

BIOGAS TRACTOR IMPRESSES SWEDES

Over the past couple of years, Valtra has been testing its N101 Dual Fuel tractor in Sweden. The biogas tractor has attracted a lot of interest among Swedes, including the Minister for Rural Affairs, Eskil Erlandsson, who has been very active in seeking type approval for vehicles powered by environmentally friendly dual fuel technology.

TEXT VISA VILKUNA PHOTO VALTRA ARCHIVE



Johan Franzen calculated that running on biogas was significantly less expensive than the diesel option.

Torque and power

Johan Franzen, a contractor and farmer in Linköping, used the Valtra N101 Dual Fuel tractor for snowploughing, sanding roads and transporting timber. According to Johan, Linköping is the biogas capital of Sweden with the city's buses and garbage trucks already operating on biogas, so Valtra's N101 Dual Fuel tractor fits perfectly into this regime.

Johan's experiences with the biogas tractor have been completely positive. When driven on biogas, the tractor felt like it had even more torque and power than when driven on diesel alone. Fuel economy also improved significantly, cutting fuel costs in January alone by around one third.

Martin Knutsson runs a major biogas plant with his father in Vram Gunnarstorp. Martin tested the biogas tractor with a front-loader and

did not notice any significant differences to his previous N101 running purely on diesel. The biogas tractor had to be refuelled every other day when used for three hours a day.

Thor Andersson, Product Manager for the Valtra importer Lantmännen, has been overwhelmed by the positive publicity the biogas tractor has received in Sweden. Having been in the industry for over 40 years, Thor cannot remember any other new tractor launch to receive such a positive reception.

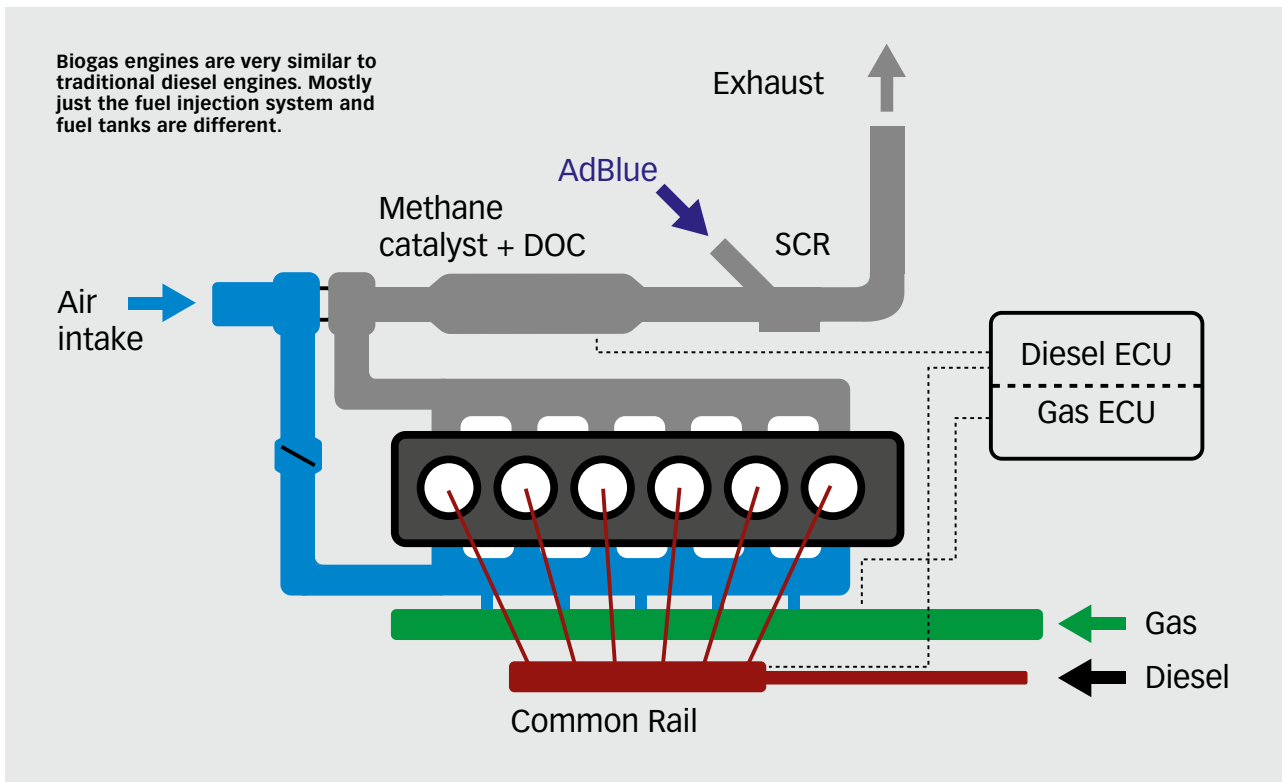
Towards a cleaner future

Scania, the southernmost province of Sweden, already has several dozen biogas stations, and more are being opened all the time. Malmö, the largest city in the province with a population of over 300 thousand, has set itself the target of having 75 percent of its vehicle fleet running on biogas by 2015.

The Valtra N101 Dual Fuel tractor supports Scania's strategy well, as biogas production potential is ten times current consumption. Decentralised energy production also improves self-sufficiency and security of supply and with Valtra tractors running on biogas, it means the tractors can be operated on 100-percent renewable energy with biogas and biodiesel. One of the end products of biogasification is nitrogen and phosphorus containing slurry, an ideal fertiliser for growing new biomass for local gas reactors. ➔

The Valtra N101 Dual Fuel tractor has undergone testing in locations throughout Sweden. **Zerny Johansson** and **Dan Nilson**, who work for the City of Kristianstad, found the biogas tractor to be even more powerful than their standard N101 model. According to Zerny and Dan, the test tractor would run for 6 to 7 hours on biogas, even when fitted with a grapple loader and trailer.





Methane + Diesel = Dual Fuel

Over the years Valtra has been a trendsetter in innovative fuel solutions. Biodiesel is already a familiar fuel, with Valtra tractors in Brazil already running on ethanol. Biogas is primarily methane an ideal diesel engine fuel. However, since methane does not combust by itself, even under high pressure, a small amount of diesel is used to start combustion – hence the name Dual Fuel.

One of the advantages of Dual Fuel systems is that the tractor engine will automatically continue to run on diesel should it run out of biogas.

The Valtra N101 Dual Fuel concept tractor has four 42-litre composite fuel tanks on the right side of chassis. The tanks can hold 34 cubic metres of biogas under pressure, which corresponds to approximately 30 litres of diesel fuel.

In the technology used by Valtra, the electronic gas injection system is extremely precise with gas

sprayed as close to the inlet valve as possible. This helps generate optimal torque and power curves. The closer the curves for diesel alone and the diesel-gas mixture are, at all engine speeds and power demands, the smoother and less noticeable it is for the driver.

Filling the tanks from a standard high-pressure pump takes five to eight minutes. When testing and

refuelling the concept biogas tractor, the idea of removable fuel tanks arose. Full tanks could be left by the edge of the field swapped with empty tanks by means of a quick coupling when needed.

Biogas tractors make a lot of sense, especially considering the environment in which tractors are used. The manure produced by livestock farms contains large amounts of methane, as does the biomass waste of crop farms. Similarly, property maintenance services are required in areas where a lot of municipal waste is created.

Kjell Christensen, Project Manager at Biogas Syd, is convinced that carbon dioxide emissions are reduced significantly when vehicles run on biogas. Fossil fuels are not required, and the methane contained in biomass is not released into the atmosphere. In fact, it has been calculated that the carbon footprint is reduced by as much as 180 percent! •



Valtra's biogas tractor was at its best when used for short everyday tasks. When used for loading three hours a day, the tractor had to be tanked every other day.



Two new large models, the Volvo BM Valmet 2005 (140 hp DIN) and 2105 (163 hp DIN) were introduced in February 1985. The latter was among the first tractors in Europe to feature an intercooler. The basic structure was based on the Volvo BM 2654 model, but the new ZF front axle made the large tractor more agile.

Volvo BM Valmet/Valmet 2005 and 2105

LAST OF THE VOLVO BM MOHICANS

In the early 1980s Volvo BM announced that it was discontinuing production of its large six-cylinder models, the BM 2650 and 2654. Around the same time Valmet had planned that its large tractors would be based on the 12+4R transmission of Valmet do Brasil's large model, the 138-4. Valmet's co-operative sales organisation in the Nordics nevertheless criticised the project since the proposed model lacked a powershift and planetary gearing in the rear axle. Since Valmet lacked the resources to solve these technical issues, it had to look to another manufacture to supply a large model.

Negotiations were held with International Harvester, Ford and Allis-Chalmers, among others, but to no avail. Since a solution was not available from outside suppliers, Valmet turned to Volvo BM. The new large model would be a modernised version of the Volvo BM 2654. The model was redesigned by the

R&D department of Scantrac, a joint venture between Valmet and Volvo, in Eskilstuna, Sweden.

The Volvo BM Valmet 2005 and 2105 were unveiled in February 1985. The new tractor models were only available with four-wheel-drive and an APL Series front axle by ZF, which reduced the turning circle to 5.4 metres. The 2005 model was powered by a 5.5-litre Volvo TD 60 B engine with 140 hp DIN. The 60 K engine that powered the larger model featured an intercooler, increasing power to 163 hp DIN. The hydraulics were improved by increasing lifting capacity to 5 tonnes and temporarily up to 6.5 tonnes.

The new models met with a relatively positive response from the market – after all, the tractors featured 14 forward gears and 4 reverse gears with the powershift. However, the largest main gear, 8+2R, was not accessible since it would have exceeded the maximum 30 km/h speed limit in Sweden. The cab, familiar

to many from previous models; what it lacked in style, it made up for in space and practicality. Altogether 455 units of the 2005-4 model and 545 units of the 2105 model were produced, satisfying the main markets up to the end of the 1980s. •



The ZF front axle made the 2005/2105 models more agile. The lifting capacity of the linkage, 5000 or 6500 kg, was particularly impressive at the time. The curb weight of the tractor was 6230 kg.

Jonathan & Tim Sell with Alex in the tractor cab.



Over A Quarter Century of
VALMET AND VALTRA

Marsh Farm on the Essex bank of the Thames estuary just south of Basildon today extends to around 700 acres. Initially a 150 acre tenanted farm it has been in the same family for five generations – since 1894 – and originally supported a dairy herd plus a retail milk business.

TEXT AND PHOTOS ROGER THOMAS

Today the farm, owned and worked by brothers **Tim** and **Jonathan Sell** plus Tim's son **Alex** concentrates on beef and cereals with a small flock of sheep. The ground, mostly within a ring fence is described by Tim as real Essex clag and no one disagrees. "Its heavy clay, the type of ground which if worked at the correct time, produces a fantastic seed bed," says Tim. "Try working it in the wrong conditions and you'll run into all sorts of problems."

The beef herd consists of 100 commercial suckler cows put to a Limousin bull for spring and au-

tumn calving with heifers and steer calves being finished on farm and sent for sale as stores. There are also 30 pedigree South Devon cows with many of the heifers retained for breeding with the remainder, like the commercial herd, sold as stores at either Colchester or Ashford markets. "We've a pedigree bull going to the South Devon sales at Exeter shortly," comments Alex. The flock consists of 100 Suffolk cross ewes with lambs sold fat. Crops include milling wheat, winter feed barley for on farm consumption. Around thirty acres of maize is grown for silage. "The

maize makes a good break crop and it gives us chance to produce a false seed bed, useful for black grass control." Around 70 acres of rye grass is planted annually for silage and as a break crop. Grazing ranges from high quality rye grass to rough grassland. "We've a contract to graze adjoining land owned by the RSPB – the South Devons do well on the rougher ground and the mixture of cattle and sheep produces the sward demanded by the RSPBs managers. Alongside the land at Marsh farm the Sells also rent a 100 acres at Grays, some eight miles distant plus some other parcels a little nearer. The family also undertake a range of contracting operations for neighbours including muck spreading and baling. "We cut around a 1,000 acres of grass last year and produced 10,000 big square bales and 30,000 conventional bales of silage, hay and haylage – there's a good market for conventional bales amongst the horse fraternity," reports Tim. Other contract work includes muck spreading for other farmers. "We've spread cattle, pig, poultry – from

60,000 chickens – and horse muck,” comments Alex

With all this activity what do the Sell family use to drive machinery? “For the last 26 years it’s been Valmet and Valtra,” says Tim. “We did have another make until the manufacturer and our local dealer Roger Bonnet parted company. At the same time Valmet opened a UK distributor in Norfolk and Roger asked me to look at Valmet tractors with him. We both liked them, he took on the franchise and I purchased a Valmet 505 which just never went wrong. Since then we’ve had a dozen or so Valmet and Valtra tractors with no complaints. With Roger Bonnet now retired we use Colchester based dealer Hosplant Sales Ltd. They’re a little further away but as Valtra are so reliable the distance doesn’t really matter.”

Today the farm runs four Valtras. “We have help two days a week from a Writtle student and take on temporary time help during busy periods,” comments Jonathon Sell. “A T163e fitted with a guidance system does most of the heavy work, and we’ve an N 121 with front linkage which at a year old has clocked just under a 1000 hours. There’s a 6650 at 7,000 hours and a 6350 with loader at 5,000 hours.” Some of the farm is ploughed with a minimum tillage system used on the remainder. During the winter the two older tractors spend a lot of their time loading or running a feeder wagon. Bedding, also done daily, is done by hand once the big bale is delivered to the yard. “Gives us chance to get amongst the animals, keep an eye on them and they’re quieter to handle too,” comments Tim.

The farm’s N121 is to be fitted with a loader in the near future. “We’re not keen on telehandlers here,” says Tim. “When we’re working away from the farm buildings, muck spreading say, if the handler leaves at the same time as the tractor and spreader the driver can wait ages to the handler to arrive – we’ve 50 kph transmissions in the T and N tractors. With Valtra’s shuttle transmission and hydraulics there’s not a lot of difference in output be-



Tim Sell with the farm’s stock bull.



The 6650 spends most of the winter on the farm’s feeder wagon.



The South Devons do well on the mixed grazing available at Marsh Farm.

tween a tractor with loader and a handler.” Tim also acknowledges that without the telehandler on the farm his insurance premiums will be reduced. Also in the future are plans to replace one of the older tractors. “But that may well have to wait a bit, a strategically placed parcel of land has come on the market which we want to take on if possible,” says Tim. Whatever happens there will be another Valtra headed for Marsh Farm in the not too distant future. •

... continued from page 15.

A DORSET FARMERS ...

“This time of year Stephen loads a diet feeder powered by the 6750 with the N121. Sam scrapes slurry with the 465 then switches to a straw spreader for bedding down the cubicles. Neil uses the T121 to spread big bales for yarded cattle while the 6550 is fitted with a hedge trimmer during winter. Stephen and Neil handle most of the farm’s other tractor work. “Contractors plant maize but we do all the other operations including cereal establishment; we have a combination 3 meter power harrow with drill.” Slurry spreading is done using a vacuum tanker fitted with a trailing shoe system. Other tractor work includes spraying and fertiliser spreading. “We do it for neighbours if asked” interjects Stephen.

During the silage season Stephen mows with the N121. Chopping and loading is done by a contractor’s self propelled machine into trailers; his own and those belonging to Stephen and neighbours. The N121 is used on the clamp. “The shuttle makes that an easy, enjoyable job.” Lynch Farm tractors, trailers and equipment also work on other farms as required. Later in the year the team move onto straw baling and haulage for themselves and others. “We make maximum use of our equipment whatever the season. Valtra tractors remain reliable for ages and don’t drink fuel like some I know. We have an excellent dealer. I don’t expect to change the brand any time soon,” concludes Stephen Symes. •



Stephen Symes finds his N121 comfortable and easy to drive.



The Valtra team played in black home team jerseys and JYP in white jerseys.



The Valtra team was coached by Pertti Laaksonen, Managing Director of Valtra's Finnish sales company. Pertti did a great job motivating his team before the game. His players had prepared well by watching lots of ice hockey on TV, so they didn't need to practice. In this picture we can see Pertti explaining to his team which one is the opponent's goal.



Highlight of the ice hockey season

VALTRA CUSTOMERS DEFEAT LOCAL TEAM JYP 12-10

On 9 February 2012 Valtra customers had the chance to play against professional ice hockey players from the local Jyväskylä team JYP. The Valtra team was made up of Finnish farmers and contractors alongside Valtra employees. The Valtra team emerged victorious in the friendly tournament, defeating JYP 12-10.

TEXT TOMMI PITENIUS PHOTO JUHA SORRI

↑↑↑ The biggest player transfer of the season occurred when JYP goaltender Joni Myllykoski defected to the Valtra team, while Valtra goaltenders Pauli Kontoniemi and Eero Suomäki switched to play for JYP.

↑↑ The JYP team underestimated the strength of the Valtra team, falling to a 4-1 deficit by the end of the first period.

↑ After the match the Valtra and JYP players enjoyed dinner and saunas together. There was a lot of discussion about the game and comparisons of the work of ice hockey players and farmers.

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Valtra Collection



38,70 €

Backpack Anatomically contoured and padded shoulder straps and back. Mesh pockets on the sides and helmet pocket in front. Padded pocket for a laptop inside. Adjustable chest and waist straps make it easy to carry. Size: approx. 30x50 cm. Volume: 30 litres.



8,71 €

Cab Metal logo at front and embossed tyre tread pattern. Velcro strap at back. Material: 100 % polyester.



Thermos mug

Capacity: 0,4 L.
Height: 218 mm.
Keeps drinks hot or cold for longer.
Quickstop cap.

17,42 €



53,22 €

Overalls Multipurpose overalls with functional details. Flexible and breathable back with a reflective print. Legs have reflective strips. Knee pad pockets made from durable Cordura. Numerous pockets and loops for tools and accessories. One spacious leg pocket. Material: 65% polyester, 35% cotton. Wash at 60 degrees.



21,29 €

Men's polo shirt Technical material that breathes and is comfortable to wear. Material: 100 % polyester. Wash at 40 degrees.



133,52 €

Pedal tractor New model! Made from extremely high-quality material that is resistant to sunlight. Engine cover opens. Length: 119 cm. Width: 57 cm. Height: 75 cm. Weight: 12.5 kg. Age recommendation: 3+.



24,19 €

Miniature models T213 and N142
Collectors' models. Not for children.
Scale: 1:32.

16,45 €

T-shirt, Power Partner

Sporty model with double cuffs and double neckline without hems. Retro-style print on front. Valtra logo on sleeve. Material: 100 % cotton. Machine wash at 40 degrees.



33,87 €

Play tractor Durable Valtra T191 tractor with front loader for indoor and outdoor use. Quiet rubber tyres. Steering wheel attaches to the roof. Cab doors open. Length: approx. 40 cm (1:16 scale). Age recommendation: 3+. Numerous implements available.

Collection
2011-2012

See us online: valtra.co.uk

Valtra Models



A SERIES

MODEL	MAX. HP/NM
A72 Classic	74/296
A83 HiTech	88/325
A93 HiTech	101/370



S SERIES

MODEL	MAX. HP/NM
S233	270/1195
S263	295/1310
S293	320/1455
S323	350/1540
S353	370/1540



T SERIES

MODEL	MAX. HP/NM
T151e HiTech	163/620
T171 HiTech	184/670
T191 HiTech	189/680
T153 Versu	155/640
T163e Versu	166/740
T183 Versu	187/770
T213 Versu	215/850
T153 Direct	155/640
T163e Direct	166/740
T182 Direct	186/750
T183 Direct	187/770
T203 Direct	204/800

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Available on the App Store



N SERIES

MODEL	MAX. HP/NM
N82 HiTech	88/360
N92 HiTech	101/450
N113 HiTech	124/510
N123 HiTech	135/540
N143 HiTech	152/600
N113 HiTech 5	124/510
N123 HiTech 5	135/540
N143 Versu	152/600
N163 Versu	163/650
N143 Direct	152/600
N163 Direct	163/650