

VALTRA

Power Partner



TwinTrac
reverse drive controls

PARTEK

Twin Trac

A great harvest with a small investment

It always pays to think in a new way, and the Valtra tractor certainly offers something positive to think about. Designed from its very conception as a four-wheel drive, this sturdy multipurpose tractor is a bi-directional working machine for every use that performs well, even on difficult terrain.

Today, work machinery is attached to the tractor, front and back. Heavier machinery is, however, always mounted in the rear because the sturdier axle, robustly dimensioned and adjustable lifting mechanisms, as well as the hydraulics system power supply and a diversified power transmission (PTO) are located in the rear.

THE NEW HITECH TWINTRAC MODELS OFFER MORE OPTIONS AND USER COMFORT FOR BI-DIRECTIONAL DRIVING THAN MOST TRACTORS OFFER WITH ONLY FORWARD DRIVING.

VALTRA





The Valtra HiTech tractors have the roomiest cab in their size range, and come equipped with a seat that rotates 180 degrees as standard equipment. There is abundant room to work in the cab, both forward and backward.

The TwinTrac reverse drive controls include a steering wheel and pedals that are installed in the standard cab. In addition, the new HiTech version has identical joysticks for changing directions in the front and in the back of the cab. The joystick is used to control start-up, and to change driving direction smoothly and easily with the aid of a computer. The HiTech joystick is also used to easily and safely operate the tractor's parking break. In the TwinTrac model, identical HiTech info displays are installed on both the front and rear columns.



Changing working direction takes place quickly with a touch of a button, without having to leave the seat. The control gear in the back does not in any way hinder the normal forward working direction of the tractor.



Harvesting machine

Over the last few decades, agricultural machinery has been developed in the direction of self-propelled speciality machinery. TwinTrac has contributed its own special characteristics to this field of development. The equipment, initially designed for forest work, is today most often sold for agricultural work.

TwinTrac offers the concept of self-propelled machinery for the use of chaffcutters and mowers: good visibility to mounted machinery, with tracking wheels positioned in the rear in relation to the driving direction. The unobstructed view reduces stresses on the operator and maintains an efficient level of work. The placement of turning wheels makes driving in curves and on headlands easy. The great thing is that after the harvesting season is over, TwinTrac still fills all the tasks of a standard tractor.





TwinTrac comes into its own when working with a variety of heavy PTO machinery. In addition to forage harvesters, different types of cutters for fields and other terrain are at their best when driven backwards, which allows for the machinery to work the untouched ground first before the wheels drive over it.

Today, forest work is mostly undertaken by contract and the workdays of wood harvesting machinery are long. The efficiency-increasing effect of reverse-drive equipment stands out clearly in loading and transporting work and especially in harvesting.

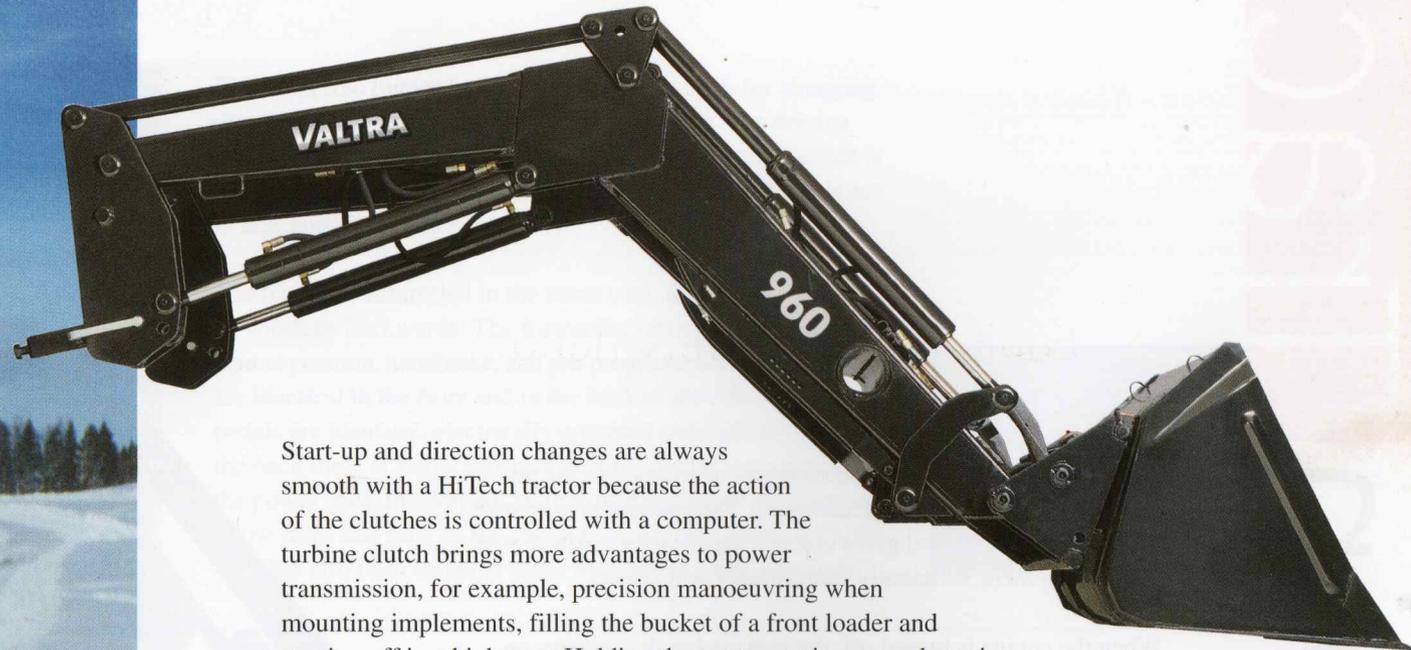


Equipment for every need

Tractors are used to complete a wide variety of tasks. It is the general utility machine for farming and other work. In Scandinavia, where the long winter makes it possible and, in a sense, also requires tractors to fill tasks other than normal farming work, the tradition of using a tractor for many tasks is particularly strong. The short summer of the north demands efficiency. Neither may multiple usage interfere with the work of the main season in any manner. These varying and harsh conditions have contributed to making the Valtra a durable machine that helps get good results in every job.

The reverse driving equipment and turbine clutch, or TwinTrac and HiTrol, represent two competitive factors worth noting. They enable the tractor and its operator to efficiently tackle many jobs that would be problematic, or even impossible with a standard tractor. In some jobs these characteristics may not bring additional advantage, but in any case they are not an inconvenience. Thanks to the customer order system, these characteristics, as well as other options, may be selected to be included in a new tractor. However, as the goal of investing in machinery is to make a profit, more and more customers choose this equipment.





Start-up and direction changes are always smooth with a HiTech tractor because the action of the clutches is controlled with a computer. The turbine clutch brings more advantages to power transmission, for example, precision manoeuvring when mounting implements, filling the bucket of a front loader and starting off in a high gear. Holding the tractor stationary and starting off are easily controlled with the accelerator pedal. The action of the clutch pedal, the use of which HiTech has minimised, is reduced to mainly being a safety device for engine start-up and for emergency stops.

When work becomes easier, efficiency levels rise and stresses on the operator decrease. These factors spell out higher productivity. HiTrol does not affect power take-off. The computerised, smooth-starting power take-off system directly uses the full capacity of the engine and the torque. The four-cylinder HiTech tractor models, up to 110-horsepower capacity, can be equipped with a turbine clutch.

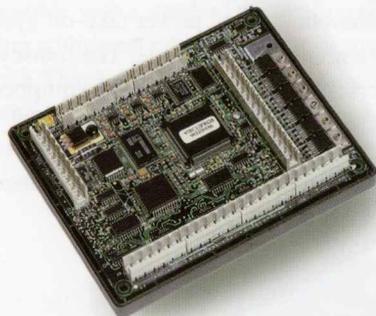


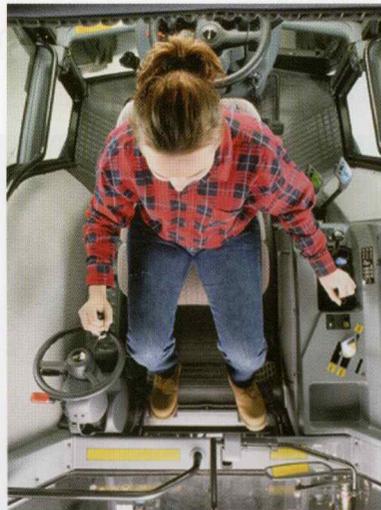
Twin Trac

Ergocab

HiTech represents a new dimension and orientation in the manoeuvrability of tractors and machinery. The operator is in control of the work process and gives orders - the computer is in charge of realising them, efficiently, comfortably and safely.

When the engine is turned off, the parking break is always on. Turning off the engine will engage the parking break automatically for safety reasons. Another important safety factor is the fact that the tractor will not move if there is no weight on the seat.





The TwinTrac tractor is equipped with a joystick for changing directions, both in the front and rear of the cab. The driving direction (the position of the seat) determines which joystick is in use. When driving backwards, the joystick in the front is not in use, and vice versa.

The tractor is controlled in the same way, whether driving forwards or backwards. The forward/reverse joysticks, with a neutral position, handbrake, and pre-programmable transmission, are identical in the front and in the back of the cab. Both clutch pedals are identical, electrically operated and light to apply. In the back there is also a separate rocking switch for controlling the power shift. In addition, HiTech display boards are installed in the front and back of the cab. An additional central warning light has also been installed in the back of the cab ("stop-light").



The HiTech info display



Shuttle drive control

The upper section informs the driving direction, the handbrake mode (engaged/disengaged), as well as the selected, or possibly pre-programmed, power-shift speed for both forward and reverse.



Delta Powershift shift control

The central section informs the selected Delta Powershift step and the recommendation of the computer to shift up or down.



Diagnostics PTO control

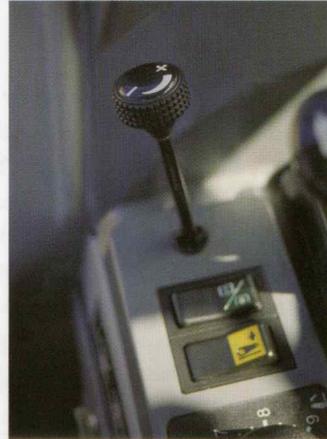
The lower section informs the PTO mode, the outside temperature and the driving speed. It can also display a service code in case of malfunction.

The range of additional equipment is vast. Here are a few examples:



Front lift and PTO

Naturally, Valtra tractors can be equipped with a front lift and a power take-off system installed at the factory. The lifting power of the front lift for the HiTech models is 3 or 3.5 tons, and they may also be equipped with, for example, a hydraulic accumulator-type antichock prevention system. The lifting power of the rear lift is 5.6 or 7 tons, and the electronic antichock prevention system comes as standard equipment.



Variable flow control valve (lever in the cab)

The output of the hydraulics of HiTech tractors exceeds 70 litres. There are 2 to 4 external hydraulics valves, of which the first one may be equipped with a variable flow control valve.



Hydraulic levelling adjuster

The use of sturdy three-point linkage equipment can be diversified with the aid of hydraulic tilting. Other optional equipment is available for lateral limiters and push and pull shafts. Tractors may also be equipped with a slip control system (requires an ACD lift).



Front axle air suspension

An air suspension system is unique in the tractor sector. It functions in every temperature, and is available for the six-cylinder Valtra tractors.

Additional front weights

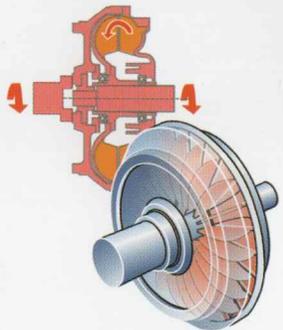
One of the main principles of Valtra is to prevent unnecessary soil compaction. However, if necessary, the weight of the tractor can be increased by over 1,500 kg by placing additional weights on the front and on the wheels of the tractor.





Turbine clutch

The turbine clutch makes power transmission very efficient: precision manoeuvring when mounting implements, filling the bucket of a front loader and starting off in a high gear are all examples of the advantages of a turbine clutch.



Ground drive

Ground drive is also an option with the HiTech tractor. The power take-off system has been designed for rugged off-road driving at slow speeds. Main applications for lime spreading.



Forestry cab

If desired, all HiTech tractors can be delivered equipped with a special cab destined for professional forest work. This cab offers a better level of protection than the standard cab. In addition, the roof of the forestry cab is completely different, with extra windows offering an excellent view of the treetops. This advantage is indispensable when operating harvesters, and it is also useful for loading work.



Forest tyres

The tractors delivered from the factory for many different uses can also be readily equipped with speciality tyres. In heavy use it is usually best to favour solid wheel rims.



Front loader

Valtra tractors can also be delivered to work straight from the factory equipped with a front loader. The option for a complete loader with mechanical or electronic valve gearing is plain hydraulic and fitting parts. This option comes into consideration if the customer already owns a loader or if it is acquired from a different location.

Twin Trac

These machines
are used to do work

The new E-version's ecological engines built by Valtra for the new HiTech tractor series are engineered to meet the European and American emission regulations, as well as the strict exhaust gas emission regulations of the European Union, which become effective in the year 2000. The engines are not only ecological, but also powerful. The professionals who use agricultural machinery in their job, as well as many competitors who use these engines in their top ranges, know that they are built according to high standards. Permatorque engines have been out on the market for three years, and during that time they have built themselves a good reputation with a torque that makes for smooth driving and increased efficiency.





Now the HiTech series also offers a four-cylinder engine series with the most powerful torque available on the market. The 4.4-litre engine provides a torque rise and an engine capacity that is unmatched by competitors. The 6.6- and 7.4-litre six-cylinder series has also been renewed. The powerful torque remains unchanged, but the pollution rate of exhaust gases is lower than before. The 140-horsepower HiTech also has a significantly increased torque capacity and the most prized model, the 200-horsepower 8950, is new.

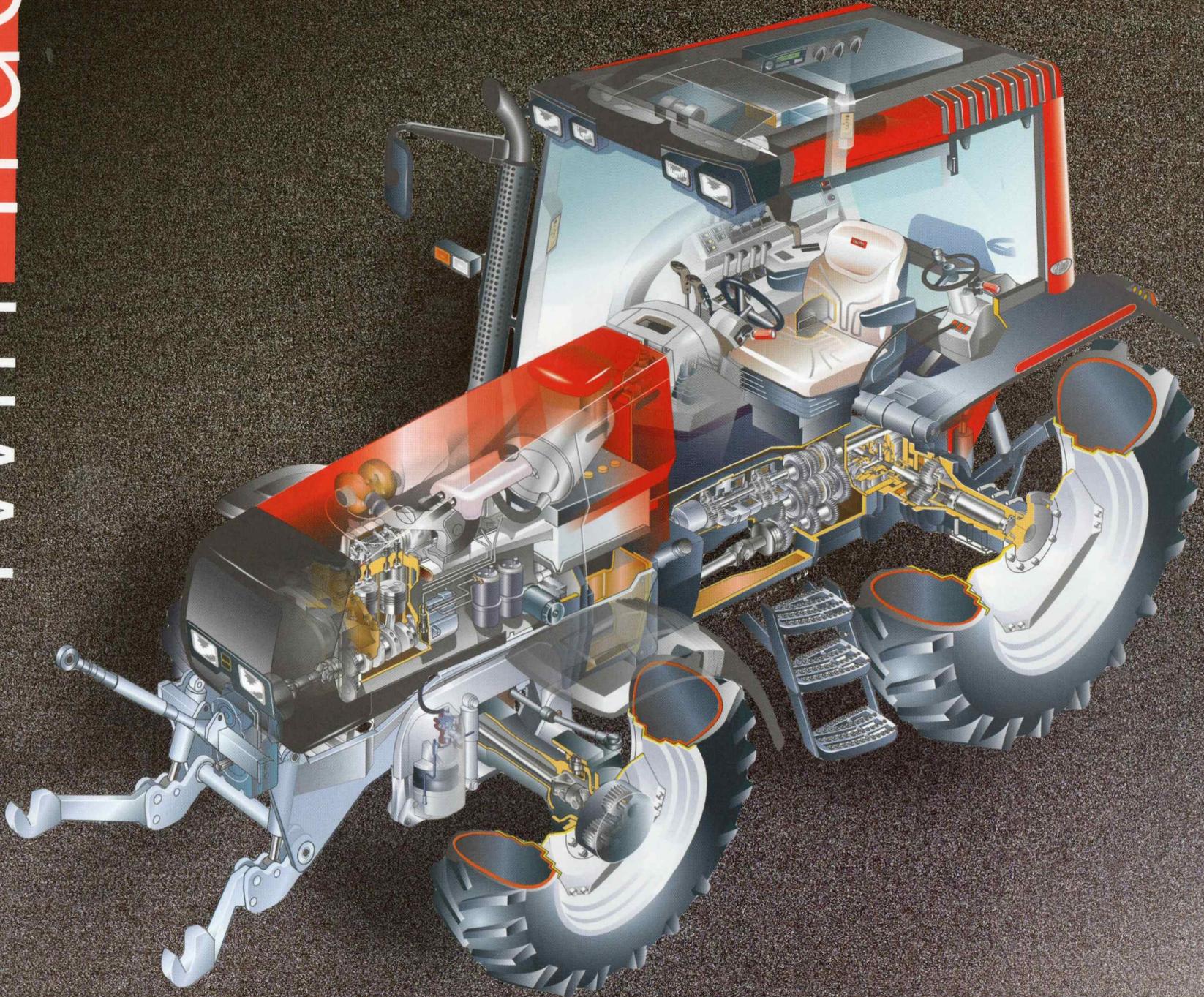
All tractors can run on the same fuel. The difference is in how to receive optimal output from diesel fuel. For this the Valtra SigmaPower offers an advantage that contractors in particular appreciate. A lightweight tractor with a lot of power: in work with PTO-powered machines, the gold medal-class economy of SigmaPower is unmatched.

The new 8950 model is not much heavier than its predecessor, the 8750, but the high-pressure fuel injection technique based on a large in-line pump supplies the transmission with more power than before, and with a lower consumption rate in practice. A new and improved engine and complete HiTech power steering ensure that the 8950 model surpasses its predecessor in performance.

The new power machine brings good results to contractors as well as to farmers in use with heavy choppers destined for work on the field or in the forest, with corn and precision choppers, as well as with wide mowers. Optimised efficiency prevents over-investing and unnecessary soil compacting, as well as ensuring profitability.



Twin Trac



HITECH RANGE

59-88 kW / 80-120 HP	6250	6350	6550	6650	6750 EcoPower	6850
Engine, Valtra Diesel	420 DSRE	420 DSRE	420DWRE	420DWRE	420DWRIE	420DWRIE
Max. power kW (hp) DIN/rpm	59 (80)/2200	66 (90)/2200	73,5 (100)/2200	81 (110)/2200	77(105)/1800	88 (120)/2200
Max. torque, Nm/rpm	360/1400	400/1400	430/1400	460/1400	530/1150	490/1400
Torque reserve, %	41	39	35	31	29	28
Number of cylinders, capacity litres	4/4,4	4/4,4	4/4,4	4/4,4	4/4,4	4/4,4
Number of gears, forward+reverse	36/36	36/36	36/36	36/36	36/36	36/36
P.T.O. rpm		540/1000 (540/540E), (1000/540E) (EHD1000)			540/1000	540/1000 (540/540E), (1000/540E) (EHD1000)
Lift capacity kg	5600	5600	5600	7000	7000	7000
Pump capacity, litres/min.	73	73	73	73	76	73
Height to top of cab, mm	2795	2795	2950	2950	2795	2950
Wheel base, mm	2326	2326	2326	2326	2326	2326
Weight, kg 4 WD	4660	4660	4660	4660	4650	4650
Tyres rear/front	18.4R38/14.9R28	18.4R38/14.9R28	18.4R38/14.9R28	20.8R38/16.9R28	18.4R38/16.9R28	20.8R38/16.9R28
Tyres rear/front	540/65R38/440/65R28	540/65R38/440/65R28	540/65R38/440/65R28	600/65R38/480/65R28	600/65R38/480/65R28	600/65R38/480/65R28

HITECH RANGE

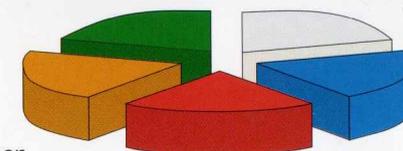
81-147 kW / 110-200 HP	8050	8150	8350 EcoPower	8450	8550	8950
Engine, Valtra Diesel	620 DSRE	620 DSRE	620 DSRIE	620 DWRE	634 DSRE	634 DSBIE Σ -power
Max. power kW (hp) DIN/rpm	81 (110)/2200	92 (125)/2200	99 (135)/1800	103 (140)/2200	118 (160)/2200	118(160) 147 (200)/2200
Max. torque, Nm/rpm	490/1400	540/1400	650/1100	615/1400	650/1400	650/1400 / 820/1400
Torque reserve, %	39	35	23	38	27	27/28
Number of cylinders, capacity litres	6/6,6	6/6,6	6/6,6	6/6,6	6/7,4	6/7,4
Number of gears, forward+reverse	36/36	36/36	36/36	36/36	36/36	36/36
P.T.O. rpm	540/1000 (540/540E), (1000/540E) (EHD 1000)	540/1000	540/1000	540/1000 (540/540E), (1000/540E) (EHD 1000)	EHD 1000 (1000/540E)	
Lift capacity kg	7000	7000	7000	7000	7000	7000
Pump capacity, litres/min.	73	73	76	73	73	73
Height to top of cab, mm	2830	2780	2830	2830	2830	2830
Wheel base, mm	2558	2558	2558/2748	2558/2748	2558/2748	2558/2748
Wheel base with Aires air-suspension	2558	2558	2558	2558	2558	2558
Weight, kg 4WD	5010	5010	5200	5210	5220	5220
Tyres rear/front	20.8R38/16.9R28	20.8R38/16.9R28	20.8R38/16.9R28	20.8R38/16.9R28	20.8R38/16.9R28	20.8R38/16.9R28
Tyres rear/front	600/65R38/480/65R28	600/65R38/480/65R28	650/65R38/540/65R28	650/65R38/540/65R28	650/65R38/540/65R28	650/65R38/540/65R28

Specifications may vary according to chosen options and market area. We reserve the right to alter the specifications and equipment without notification. For further information, please contact your local dealer. (Please note! There will be some optional extras added to the tractors in the pictures in this brochure.)

For more detailed information of our products, please, see the brochures and Valtra Valmet internet pages at www.valtra.com

Colours available:

Metallic colours: red, blue, green



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www.valtra.com



Valtra is a Partek brand

Partek supplies mobile logistical solutions for customers in the transportation sector, industry and primary production. The Group's net sales total EUR 2.5 billion, about 80 percent of which is generated outside Finland. Partek employs 13,000 people.

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