

VALTRA

Power Partner

ENG

S series



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Valtra is focused entirely on tractors, their transmissions and engines, and related services. This high level of specialisation has made Valtra a significant global company. In Europe, Valtra is the fastest growing tractor brand. Valtra has manufacturing plants in Finland and Brazil, and Valtra tractors are also built under license in India. The company also has a diesel engine plant located in Nokia, Finland.

The high level of internationalisation can be seen in the fact that owners of Valtra tractors are located in over 90 countries worldwide. For the past ten years Valtra has specialised in custom-made tractors designed according to the specific needs of the customer, and now it is the turn of the remarkable S series. Valtra is recognised for reliability, safety and innovation, and this tradition continues with the S series line of tractors.

Surveys confirm that Valtra owners are satisfied with their Valtra tractors and maintenance services.

VALTRA

Power Partner



International recognition

Valtra S design



The modern and unique design of the S series received glowing praise when it was unveiled to the public. Journalists representing Europe's leading agricultural machinery publications awarded the S series the Golden Tractor design prize for 2003. With the Valtra S, stunning looks are combined with practicality and comfort.

••••• **ADVANTAGES** •••••

- The design offers unmatched visibility in all directions, thus augmenting safety
- The use of implements is efficient and ergonomic
- Class-leading ergonomics increase productivity
 - Reverse driving has never been simpler



The Valtra S is a true trendsetter for modern tractor design.



The powerful Valtra S series

Tomorrow's tractor technology today



The tractor world has a new star in the over 200 horsepower class: The Valtra S series offers the high performance capabilities and unique adaptability demanded by large implements.

The class-leading S series allows you to access the benefits offered by modern implement technology and to achieve the highest levels of productivity.

The Valtra S revolutionises the way we think of tractors. The design is based on the decades of experience that Valtra possesses in the development of tractors.

••••• **ADVANTAGES** •••••

- Size determined by the needs of larger farms and contractors
 - Built-in capacity to meet changes in intended use and the needs of new customers in contracting work
 - Ability to competitively increase the range of uses beyond those of traditional tractor work
 - An investment in high productivity
 - Enables the use of ISOBUS-fitted implements



The best cab ergonomics

More space, better visibility, increased safety



The cab is spacious; large windows guarantee excellent visibility in all directions.

••••• ADVANTAGES •••••

- Four post cab and well positioned mirrors ensure ultimate visibility
- Four large windows with massive glass area provide uninhibited vision
 - The floor of the spacious cab is even from front to back
 - Automatic climate control provides a comfortable working environment throughout the year
 - Air suspended cab offers the highest level of comfort in all conditions
- Excellent lighting means work can continue uninterrupted after sunset
- Turning seat is standard equipment, with reverse drive system optional
 - Low noise level in the cab means a pleasant and relaxing working environment

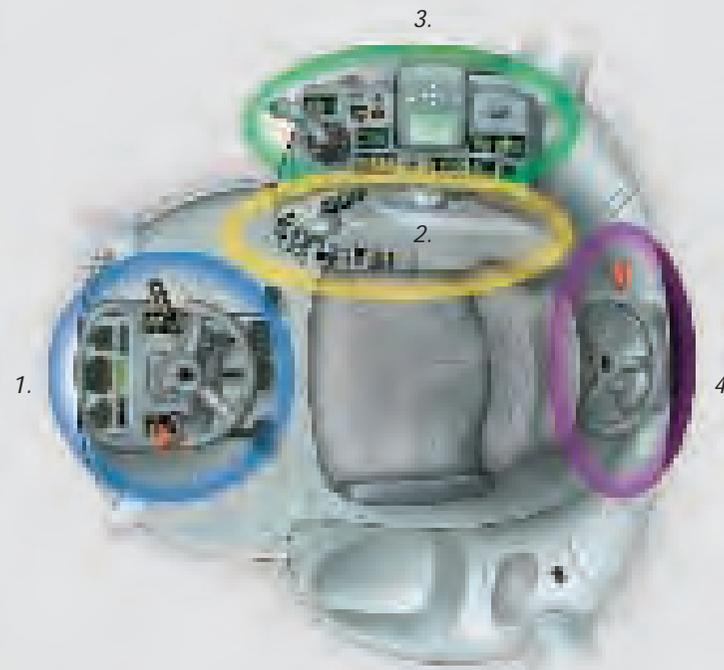
The modern and ergonomic cab of the S series offers the driver an excellent working environment. In order to achieve the greatest possible visibility, the cab has only 4 pillars. Large windows that are elegantly curved ensure visibility in all directions. Powerful multipurpose lights improve vision for working at night. Fifteen programmable and adjustable working lights guarantee visibility in close proximity as well as far into the distance.

The cab rests on automatically self-levelling air suspension; combined with an air suspended seat, the driver is guaranteed excellent levels of comfort at all speeds, regardless of pulling loads and driving conditions. No matter how big the driver, the spacious cab offers a comfortable and ergonomic seating position. There is even enough room for a passenger seat. Automatic climate control keeps the air fresh while maintaining a steady temperature. Powerful fans and adjustable vents ensure that the large glass areas remain clear and free of mist without feeling the draft.



A pleasure to drive

Steady and easy to control



The controls in the S series cab are divided into four separate areas:

- 1. Driving controls, including warning and display lights, are located on the front dashboard*
- 2. Often used driving and hydraulic controls are located in the armrest*
- 3. Controls for presetting and activating functions are located in the side control panel*
- 4. The TwinTrac reverse drive system occupies the fourth area.*

The S series is a drivers' tractor. The working environment within the cab has been designed to be as efficient as possible for both forward and reverse driving. The positioning of the instruments and controls was decided upon in co-operation with professional tractor operators.

The main controls are located on the individually adjustable armrest. The shape and location of the controls themselves allow the driver to operate a number of them simultaneously without having to remove his hand from the armrest. The wide range of adjustability of the armrest allows each individual driver to find the position that suits him best.

The Tractor Terminal features a colour display unit which allows the driver to program and supervise several tasks. Work is made easier by a wide range of pre-programmable systems for driving and for operating implements. The TwinTrac reverse drive system is optional and allows the tractor to be operated efficiently in both directions.

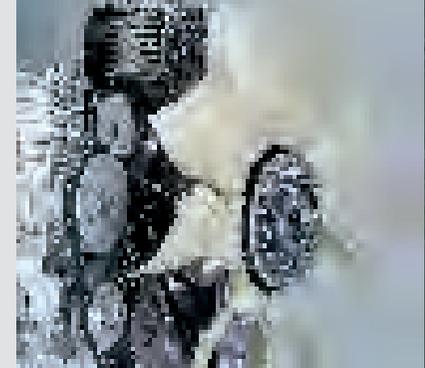
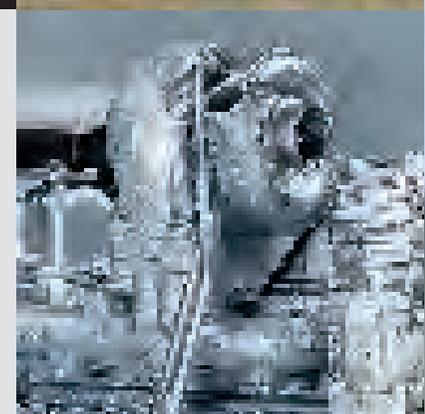
••••• ADVANTAGES •••••

- Ergonomically positioned controls help you to work efficiently for long periods
- Location of controls based logically on how they are used, all within easy reach of the driver
- Double controls mean they can be accessed from different positions depending on the situation

Valtra engines

Strong pulling power – efficiently

Valtra engines are also used by other tractor manufacturers. Tractor Pulling competitions, in which Valtra has been very successful, offer a challenging environment for engine development.



Valtra has manufactured off-road diesel engines for around 60 years. The S series uses the latest six-cylinder engines that combine efficiency, reliability and economy.

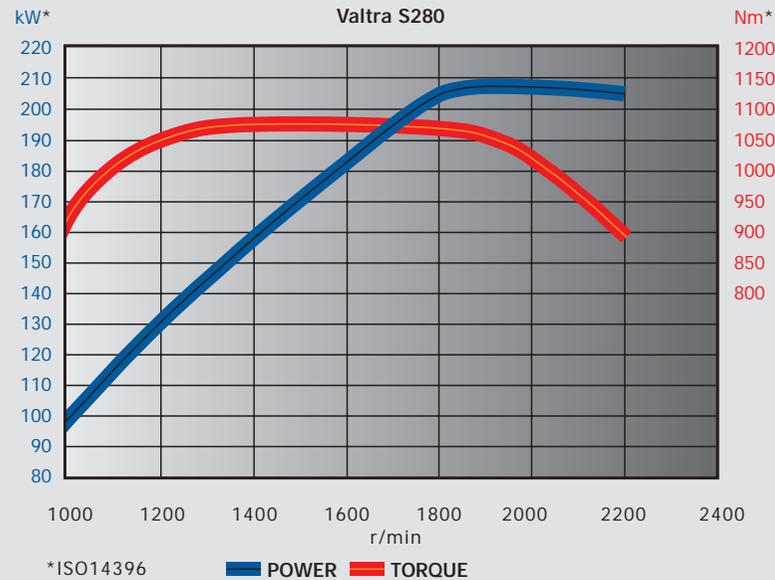
Displacement

The cylinder capacity of all S series engines is 8.4 litres, with a bore of 111 mm and a stroke of 145 mm. The long stroke guarantees a broad band of torque at low revolutions, thus meeting the performance demands of this class of tractor.

A balanced package

Big tractors today must offer powerful pulling capacity for many different types and combinations of implements in all conditions. In order to achieve the best economy, driveline efficiency and traction must be maximised.

The large displacement engine provides strong torque across a wide range of revolutions, thus offering flexibility for different implements in different tasks. In addition, the S series is well balanced and has a low overall weight to minimise soil compaction. Where needed, the weight can be increased up to 14 tonnes by adding ballast.



Electronic engine management ensures that the engine reacts quickly to load changes.

••••• ADVANTAGES •••••

- 8.4-litre Valtra engine with a maximum output of 280 hp
 - Good fuel efficiency
 - Higher performance, lower costs
- Powerful engine designed for this class of tractors
- 500-hour servicing intervals, low maintenance costs
 - Minimised environmental impact
 - Strong torque: efficiency at work
 - Cruise control: makes working easier
- Excellent start-off torque: makes driving easier



Efficient driveline technology

Power without losses

Turbine clutch

The efficient transmission of the Valtra S series offers a wide range of options for all tasks. A maintenance-free turbine clutch ensures a smooth and easy start-off. Valtra's powershift provides fast acceleration up to the target speed.

Cruise control and 4 WD automatics

Cruise control utilises electronic engine management to maintain the predetermined driving speed or PTO engine speed. Four-wheel-drive automatics in turn helps control wheel-spin. Four-wheel-drive and differential lock are activated automatically according to the amount of slip at each wheel. The four-wheel-drive is deactivated for tight turns in the headland and reactivated when the wheels are again straightened. The S series transmission offers 10 speed ranges (0.5-50 km/h), providing excellent power and flexibility when working with different kinds of implements.

Four-step powershift

Valtra's four-step powershift offers smooth shifting and a wide choice of speeds, including 11 ratios for working speeds of between 3 and 12 km/h.

Power shuttle

Valtra's power shuttle allows the driving direction to be changed smoothly via a lever on the steering column. A parking brake is integrated with the power shuttle and is engaged automatically when the engine is turned off. The desired powershift ratio for each direction can be pre-programmed to engage automatically. This is especially useful in headland work.

Automatic modes

In addition to shifting manually, the powershift has two separate automatic modes. Auto 1 is programmed to optimise the performance and fuel efficiency of the tractor and selects ratios at the most optimal engine revolutions according to the load in order to minimise fuel consumption. Auto 2 can be programmed by the driver to suit his own driving style. Pre-programmed shifting occurs in relation to engine revolutions.





Autocontrol

Heavy-duty, programmable power lifts

The Autocontrol, the automatic control of the linkage is a popular and appreciated feature on Valtra models. In the S series, the Autocontrol system makes controlling the linkage particularly simple, as the most important controls are located in the arm rest. The arm rest is a real control centre for work implements, allowing the driver to easily and effectively operate the linkage and auxiliary hydraulics without having to move his arm.

In addition to its basic functions, the S series linkage includes slip control. In tough terrain, the system minimises wheel spin by raising the implement. Drive Balance Control is included as standard equipment. DBC acts as a suspension and shock absorber when transporting heavy implements on the tractor linkage.

The optional front linkage offers a wide variety of adjustments. Position control is standard and the raising and lowering speed can also be adjusted.

The superior properties of the front and rear linkages on the S series allows for the use of heavy implements, including combinations such as a roller in the front and a tiller and seed drill on the rear. The excellent weight distribution and easy ballasting of the S series also offer improved safety when transporting large and heavy implement combinations.



••••• ADVANTAGES •••••

- Lifting capacity: 7.5 tonnes at the front and 10 tonnes at the rear
 - Powerful, electronically managed front and rear linkages
 - Armrest controls also for rear linkage
 - Total lifting functionality, including slip control: enables full utilisation of implements
 - Optional Autocontrol front linkage also electronically controlled
- Position control plus quick control up/down also at front: efficient and precise utilisation of implements
 - External controls for raising and lowering front lifts: easy to connect implements





Advanced hydraulics

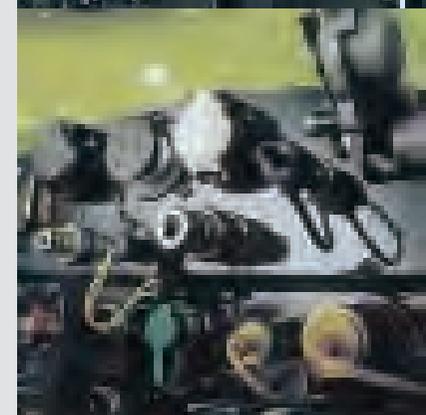
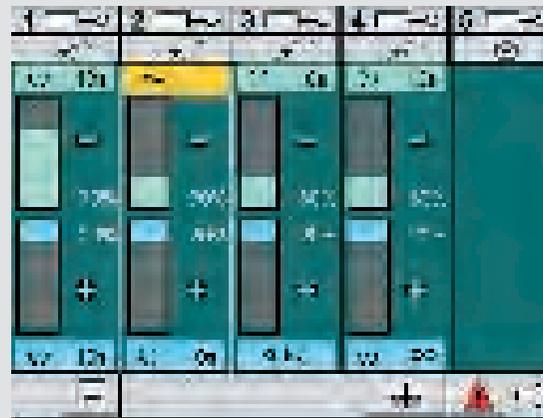
Programmable via the Tractor Terminal

The advanced Load Sensing hydraulics on the S series use a separate hydraulic circuit thus the oil is not mixed with transmission oil. In addition, the output of the variable displacement hydraulics pump is 147 l/min, enabling the system to handle implements with multiple hydraulic demands.

The auxiliary hydraulics has seven fully programmable double acting valves, two of which can be used for the implements connected to the optional front lift. Should an implement require especially high output from the hydraulics, or if the implement is equipped with its own separate control system, the S series has also Power Beyond oil supply system. This system offers pump output for implements. Power Beyond features full capacity of pressure and return lines together with load sensing line for monitoring and controlling the flow.

The auxiliary hydraulics are controlled from the Tractor Terminal. By choosing the hydraulic function from the system's menu, the driver can view immediately the settings for each valve. These settings can also be changed in real time. The Tractor Terminal can be used to activate or deactivate a valve as well as to determine the flow (0-80 l/min), time of supply, constant supply and floating position.

The S series even allows the driver to determine the reaction of the valve in relation to the movement of the joystick, in other words how the joystick movements affect the flow of oil. The relation between the joystick and flow can be adjusted from completely linear to more progressive, whereby a small movement has very little effect on the flow and further movement rapidly increases flow.





Advanced hydraulics

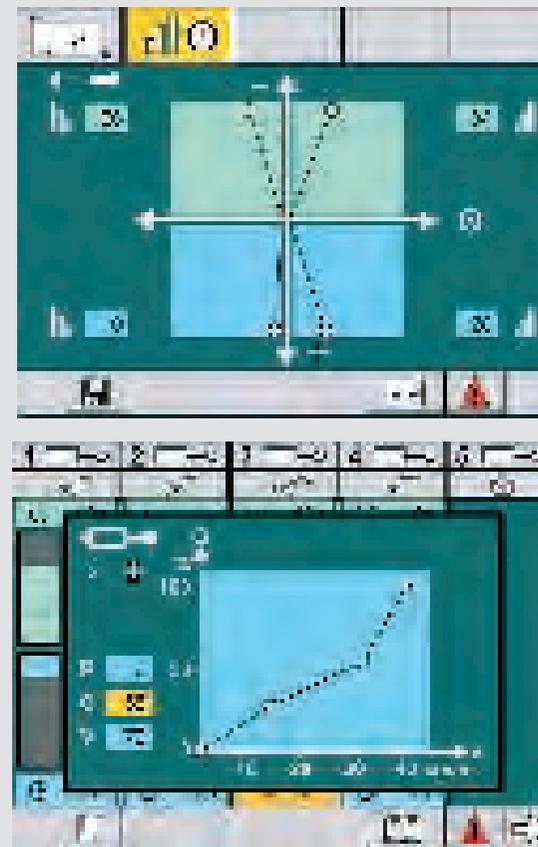
All settings can be saved for the future use

The ramp time needed to open and close each valve can also be adjusted. This is especially useful for heavy machinery or delicate tasks that require a smooth start-off and stop.

The flow rate can also be adjusted according to the tractor's travel speed. This allows spreading machines, for example, to be controlled and utilised efficiently in relation to the tractor's speed.

••••• ADVANTAGES •••••

- Auxiliary hydraulics designed to serve modern implements
 - Seven valve blocks as standard: sufficient for all needs
 - All valves and ports individually adjustable
 - Individual settings for time and flow: implement operation can be precisely selected and most functions automated using the tractor's auxiliary hydraulics
 - Settings can be saved in the Tractor Terminal memory: all data and experiences are stored when changing implements
 - Armrest controls enable access to five hydraulic valves without moving your arm
 - Ergonomic controls reduce the risk of error and misuse
- Operations programmed into the Tractor Terminal begin only once the activating button is used simultaneously with the control lever
 - Two pair of quick couplings are also available for front mounted implements





TwinTrac

Reverse drive controls create ultimate versatility

The Valtra S series introduces a new era of tractor-based harvesting. The optional TwinTrac reverse drive system means driver comfort and ergonomics are equal to self-propelled harvesters. Excellent visibility over the crops being harvested and the shredding chute creates an ideal working environment.

The TwinTrac reverse drive controls on the S series allows the tractor to be driven in reverse just as easily as forward operation. Excellent visibility and powerful driving lights combine to offer unique ergonomics for reverse driving. Many implements can benefit from the high level of manoeuvrability of the S series in reverse driving. Wide mowers, for example, can be utilised in this way.

To facilitate reverse driving, an adjustable steering wheel is located in the rear of the cab, along with the shuttle lever, pedals similar to the front and two digital readouts for monitoring key functions. Turning the seat to the rear automatically switches the rear steering and transmission controls. The multifunction armrest also turns automatically with the seat.



••••• ADVANTAGES •••••

- A more versatile tractor, more working hours, lower costs per hour
 - Ergonomics when using harvesting implements on a par with propelled harvesters
 - Visibility over work clearly better than forward operation: more efficient and less tiring
- Reverse drive system does not impede normal forward operation
 - Engages automatically without rising from the driver's seat



Designed to handle the toughest jobs

Unmatched levels of performance and impressive versatility

The increasing size of farms and the growing popularity of contracting have created a demand for economic, efficient, versatile and sufficiently powerful tractors. Accordingly, S series boasts a large-displacement, high-torque, low-emissions engine, modern driveline technology, a wide selection of gear ratios, cruise control and a semi-automatic powershift transmission. These qualities have been combined with a well-balanced wheelbase and good weight distribution. This adds up to strong pulling power and confident handling – in short, excellent performance for all tasks.

Need more convincing? How about a top speed of 50 km/h, pre-programmable high-capacity auxiliary hydraulics, powerful front and rear lifts, and excellent transporting capacity.



••••• ADVANTAGES •••••

- The Valtra S: power for all tasks
- Technically compatible with the most modern implements
 - Unsurpassed comfort levels with implements attached
 - Versatility means a high resale value
- An excellent tractor for transportation purposes, up to 50 km/h
 - TwinTrac reverse drive system
- Ideal weight distribution and ballast system



Valtra maintenance services

At Valtra we take good care of our customers and our tractors. The Valtra service team provides fast and comprehensive maintenance services for all your tractor needs. We make things simple for you, so that you can concentrate fully on your own work. Your tractor will continue to run reliably and its resale value will remain high.



All original Valtra spare parts are guaranteed and supplied direct from the factory in Suolahti, Finland. They arrive in all European countries usually within one day.

..... **ADVANTAGES**

- Valtra-trained technicians provide reliable service even on your own farm
- A well maintained Valtra tractor will always keep its high resale value
 - Fast and efficient maintenance services: more time for yourself and your family
- The Valtra Tractor Terminal notifies you in advance of servicing requirements





Technical specifications

	S240	S280
Engine	84ETA, electronic control	
Max output at 2200 rpm, kW (hp)*	181 (246)	206 (280)
Max torque at 1400 rpm, Nm*	970	1075
Torque reserve %	24	20
No of cylinders/Displacement, L	6 /8,4	6 /8,4
Fuel tank capacity, L	620	620
Transmission		
Turbine clutch	Standard	
Main clutch	Wet, multi-disc	
Shuttle	Computer controlled hydraulic, pedal-free	
No of speeds	40F + 40R	
Main gears	10, mechanical selection, pedal-free	
Powershift	Computer controlled, 4 steps	
Creeper	Standard	
4WD	Manual or automatic operation	
Differential lock	Manual or automatic operation, front and rear	
PTO, rpm/at engine speed	1000 /2112	
Front PTO, optional, rpm/at engine speed	1000 /2071	
Brakes		
Type	Wet multi-disc, power assisted	
Parking brake	Hydraulically released by shuttle lever	

*ISO 14396

Speed

	50 km/h, 520/85R42				50 km/h, 650/85R38				
	I	II	III	IV	I	II	III	IV	
LL1	0.43	0.52	0.62	0.74	LL1	0.48	0.58	0.70	0.84
LL2	0.74	0.89	1.07	1.28	LL2	0.84	1.01	1.20	1.45
LL3	1.09	1.30	1.56	1.88	LL3	1.22	1.47	1.75	2.11
LL4	1.61	1.93	2.31	2.77	LL4	1.80	2.17	2.60	3.12
1	3.1	3.72	4.45	5.35	1	3.48	4.18	5.01	6.01
2	5.35	6.42	7.70	9.24	2	6.02	7.23	8.66	10.4
3	7.81	9.37	11.2	13.5	3	8.78	10.5	12.6	15.2
4	11.5	13.9	16.6	19.9	4	13.0	15.6	17.7	22.4
5	18.0	21.6	25.9	31.1	5	20.2	24.3	29.1	35.0
6	26.6	31.9	38.3	46.9	6	29.9	35.9	43.0	51.7

Hydraulics

Electronically operated rear linkage	Standard
Lifting capacity, kN	100
Electronic controlled front linkage	Optional
Lifting capacity, kN	75
Hydraulic pump	Variable displacement
Max pump capacity, l/min	147
Max pressure, bar	200
Number of auxiliary valves	7
Available oil volume for auxiliary functions	85/100

Dimensions and weights

With tyres 480/65R30 + 520/85R42

A=Length, mm	5100
B=Width, mm	2500
C=Height to top of roof, mm	3400
D=Height to top of exhaust pipe, mm	3400
E=Wheelbase	
- standard axle, mm	3082
- suspended axle, mm	3107
F=Clearance under front axle, mm	560
Fi=Clearance under rear axle, mm	520
Total weight, kg	8800
Front axle weight, kg (%)	3780 (43)
Rear axle weight, kg (%)	5020 (57)



Equipment

STANDARD AND OPTIONAL EQUIPMENT

Engine

S240/S280

Turbocharger	•
Air to air intercooler	•
Electronic engine management	•
Cruise control, engine speed/driving speed	•

Transmission

Turbine clutch	•
Power shuttle	•
HiShift button clutch	•
4-step powershift	•
Powershift automatic	•

Front axle

Hydro-pneumatic suspended front axle, with automatic or manual height adjustment	•
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PTO

Rear PTO, 1000 rpm. Shaft 45 mm, 20 splines	•
Front PTO, 1000 rpm. Shaft 45 mm, 20 splines	•

Power lift

Rear linkage, electrohydraulic, CAT III, lifting capacity 10 tonnes	•
Hydraulic top link	•
Hydraulic lifting arm adjustment	•
Electrohydraulic front linkage, CAT II, lifting capacity 7,5 tonnes	•

Auxiliary Hydraulics

7 proportional double acting valves	No. 1, with 100 l/min max output	•
	No. 2-7, with 80 l/min max output	•
	No. 2-6, with zero -leak lock valves	•

All valves are programmable via Tractor Terminal

Rear Power Beyond capacity is 36 kW and output 130 l/min with max engine rpm

Power Beyond system has:

- 20 mm quick coupler, pressure outlet
- 20 mm quick coupler, free flow oil return
- 12,5 mm quick coupler, leakage coupling
- 6,3 mm quick coupler, LS-signal line

Front Power Beyond capacity is 36 kW and output 130 l/min (couplings as above)

Telescopic Pick-up hitch	•
Trailer/Implement hitch	•
Agricultural drawbar	•

Cab

Cab suspension	•
Front and rear wipers and washers	•
Air suspended seat with seat belt	•
Passenger seat with seat belt	•
Electrically adjustable and warmable mirrors	•
Automatic climate control	•
TwinTrac reverse drive system	•
Hydraulic trailer brakes	•
Pneumatic trailer brakes	•

• Standard • Optional

Specifications may vary according to chosen options and market area. We reserve the right to alter 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.



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