ROTTNE F13^{S}

PERFECTION IN ALL DETAILS!

F13^{S}

New forwarder cab

The newly-developed cab features an extremely modern design where the operator actually sits in the centre. The large windows and low-set instrument panel provide an uninterrupted view of the immediate and overhead surroundings. The cab, in which it is possible to stand up, is extremely spacious and well insulated to ensure low noise levels.

The air conditioner, with filters for both fresh air and recirculated air, has a high fan capacity and 16 air inlet vents in the lower part of the cab, as well as adjustable vents in the roof. The air-cushioned operator's seat is equipped with Airvent and infinitely adjustable armrests. The lever panels with function buttons and the settings and monitoring display for the machine control system are incorporated into the armrests, so that they move when the seat moves.

The forwarder has no steering wheel. On roads it is controlled by a mechanical lever on the right side panel, while off road it is controlled using a joystick on the armrest's lever panel. The instrumentation also includes electric switches on both sides of the operator's seat and in the ceiling panel, and there are a number of integrated storage compartments in the cab.

An appealing and comfortable operators station

Rottne D5

The Rottne D5 machine control system, which is based on CAN bus technology, controls and monitors the engine, transmission and loader. D5 comprises a main computer, a 7" colour touch screen, and a number of nodes set out on the machine close to the function to be controlled. The main computer communicates by means of a CAN bus cable linked to all the nodes.

The operator can adjust settings for the loader, transmission and engine, monitor pressure, temperatures and fluid levels and perform troubleshooting using the display (touch screen) in the armrest. Alarms are indicated by visual and audible signals and are displayed in clear text on the display.

New design

Well designed

Rottne F13^{S}, which is replacing Solid F12^{S} in our machine range, is largely a brand new forwarder. It has a higher load capacity than its predecessor and a higher level of performance all round. The power train has a higher-output engine and features a new generation of hydrostatic components, which provide increased tractive force and offer the potential for higher speeds with heavy loads.

This is an 8-wheel forwarder with portal-type bogies. The wagon, which has an articulated bogie, is manufactured according to the same concept as Rottne F18, with a tapered central frame that provides additional ground clearance under the articulated joint. The front gate is hydraulically controlled and height adjustable, and the load area can easily be adapted for short timber lengths to ensure ideal weight distribution and stability.

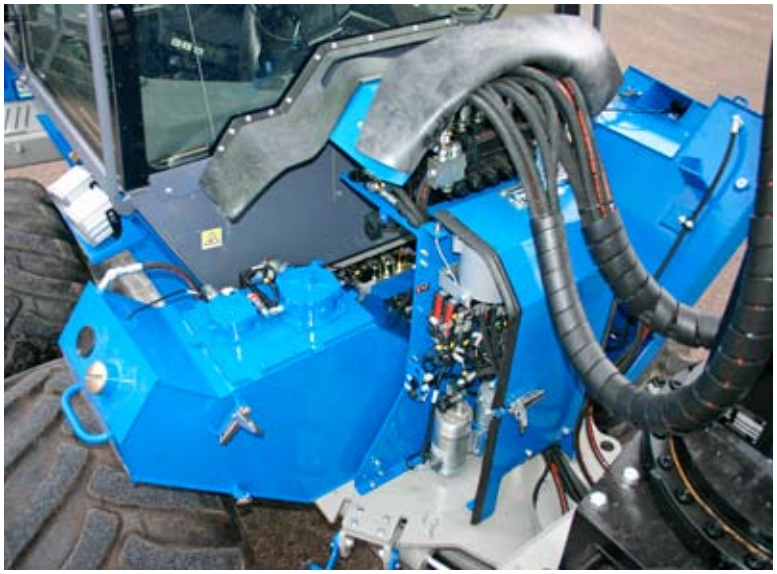
The operator environment is superb thanks to the light, spacious and quiet cab that also offers excellent visibility. The ergonomically designed lever panels feature all the functions used most frequently, which means that hauling work can be performed in a safe and flexible manner.

Rottne F13^{S} – new technology and first-class comfort and function

The CAN Bus-based Rottne D5 machine control system, with small yet robust units for demanding environments, controls all electronic equipment on the machine. The operator controls the system and is kept informed of its status via a colour touch screen in the armrest. The system permits personal settings for the loader and transmission for up to 8 different operators, including choice of language, which speeds up shift changes.

The electrical system also uses modern CAN Bus technology, providing considerable benefits in terms of wiring in narrow conduits, as the fewer wires there are the simpler the wiring. In addition, the position of the distribution box in the side wall of the cab has been optimised, as fuses can be checked/replaced from the operator station. However, all servicing of the box is performed via an access panel on the outside of the cab.

The newly-developed forwarder cab easily satisfies the ergonomic guidelines that apply to forestry machines. Rottne has become the first manufacturer in the industry to make a huge breakthrough in reducing vibrations in the cab by means of the Comfort Line gas/hydraulic cab suspension system, which is now available as an optional extra. The system is activated by a button once the engine has been started. This raises the cab approximately 5 centimetres to ensure suspension movement, after which point the suspension functions automatically until the engine is switched off.



The hydraulic tank is folded out at filterchange

Nowadays, almost all forestry machines use synthetic oil in their hydraulic systems. However, this type of oil is sensitive to aeration. To counteract this problem Rottne has developed a system where the return filters always remain below oil level. This system has been used to good effect in Rottne's harvesters for a number of years and has now been incorporated into Rottne F13^{S}. When you need to replace the filters, the hydraulic tank can be tipped and lowered to one side in one simple step so that the filters are on top.

As safety is a top priority, on most markets the machines are equipped with reversing cameras. On forwarders there is one camera on the front of the cab and a second on the back of the wagon. The driving direction automatically determines which camera is connected, and when the machine is in motion the picture is shown on the D5 display in the armrest.

Loose tools and other objects on the cab floor are a hazard, but are still a common sight when little storage space is available. The cab of the F13^{S} has a number of storage compartments integrated into the instrument panels, and there is also a heated compartment for food containers.

The service access is extremely good.

Service access

Serviceability is an important factor during development work on all Rottne machines. Downtime can prove expensive for machine owners and good service access can significantly reduce the time needed for servicing, repairs and cleaning. Rottne F13^{S} is no exception in this respect.

It takes only a few minutes to access all areas of the machine. The engine and transmission are revealed by tilting the engine hood forwards and tipping the cab sideways hydraulically. The front and rear belly plates have hinges mounted under the front bogie and the entire underside opens when these are lowered.

Troubleshooting on the electrical system can largely be carried out via the D5 system's operating screen. A vacuum pump for the hydraulics and filling equipment for hydraulic oil and diesel are available as optional extras.

Robust forwarder

Rottne F13^{S} is a powerful forwarder with a 13-ton load capacity. It has a robust frame design that includes a strong articulated joint and an integrated articulated frame lock. The power train boasts a powerful diesel engine and conventional hydrostatic transmission providing high tractive force.

Portal bogies and a wagon frame that is slightly tapered from the bogie forward provide good ground clearance. The bogie lift, which is an optional extra, makes the forwarder more flexible in certain situations. The front gate and first bunk are hydraulically adjustable, while the other load bunks are screwed to the frame, and can be moved into different positions along the frame.

The forwarder loader, RK 125, works rapidly and has good motion geometry and high lifting power. It has a reach of 7.1 metres with a single extension unit or 9.2 and 10 metres respectively with a double telescopic arm, which then also has protected hose lines running through the rotator to the grapple.

The cab's windows are made of polycarbonate and have been treated to reflect infrared radiation in order to reduce heat gain caused by sunlight.

The front cover can be opened separately

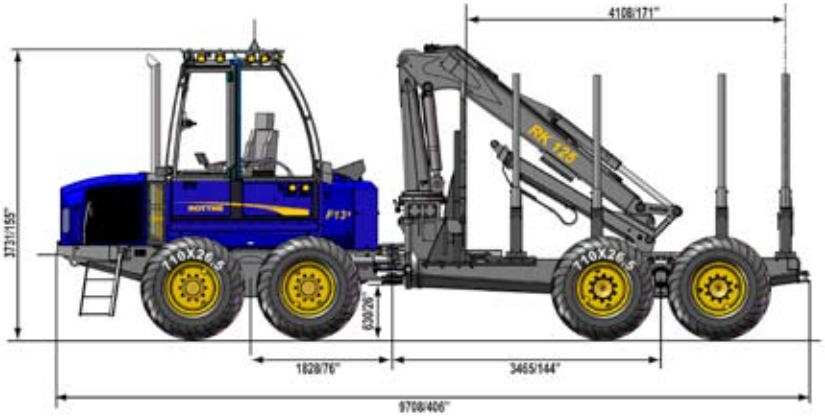
Service ladder incorporated in the protective hood

Forwarder computer

Communication between forwarder and harvester and with principals and landowners is becoming increasingly important. To satisfy this requirement, a forwarder computer comprising a computer and colour touch screen is available as an optional extra. A GSM telephone and a GPS receiver with GIS software can be linked to this. This equipment enables the harvester's production files and tract maps with working routes to be transmitted to the forwarder to ensure that all felled timber is collected.

Software is also available for reporting the daily production of forwarders with coordinates for the position of roadside timber stacks.

An advanced operations follow-up program is also available for anyone wanting more detailed follow-up on times for loading, unloading, transport, servicing and repairs, etc.



Eco-friendly engine

Rottne F13^{5} has a powerful 6-cylinder Tier 3 eco-friendly engine that comfortably fulfils applicable emission requirements for current diesel engines.

The engine is named Power Tech Plus, and it has, among other things, modern 4-valve technology, a common rail injection system and a variable turbocharger, which provides excellent responsiveness with rapid power output.

This technology and electronic means of control enables the power curve and torque to be adapted to the optimum rpm range for forwarders.

The forwarder can therefore be operated at a slightly lower working engine speed, resulting in a lower noise level, less vibrations and, most importantly, lower fuel consumption.

Technical data

ENGINE
JOHN DEERE 6068 HF 485 Power Tech Plus Tier 3
Cylinder volume.....6,8 liter (415 in³)
Torque at 1.500 rpm.....934 Nm (688 lbf ft)
Output at 1.800 rpm.....168 kW (225 hp)
Tank capacity .....165 liter (44 US gal)

TRANSMISSION
D5-controlled, hydraulic/mechanical with full capacity control
Tractive force.....177 kN (39 800 lbf)
Speed gear 1.....0 - 9 km/h (0-5,6 mph)
Speed gear 2 .....0 - 25 km/h (0-15,5 mph)

WHEEL EQUIPMENT
710 / 45 X 26,5 T428 SB

HYDRAULIC SYSTEM
Load-sensing constant pressure system,
entirely separate from the transmission.
Capacity.....210 litres/1.500 rpm (55 US gal)
Working pressure.....3 - 22 MPa (440-3200 psi)

CHASSI
Welded frame structure with a ball-race-type articulated joint and articulated frame lock.
Welded bunks screwed to the wagon frame.
Front gate/front bunks hydraulically adjustable 75 cm (29 in) backwards and gate height adjustable by 40 cm (16 in)
Wagon steering.....± 11°
Load area.....4,7 - 5,5 m2 (50-59 sq ft)

CAB
New forwarder cab certified for ROPS, FOPS, OPS
Noise level.....69 dBA

ELECTRICAL SYSTEM AND CONTROL ELECTRONICS
24-volt electrical system with Rottne D5 control system.
Work lighting .....20 pcs

LOADER RK 125
Knuckle boom loader with double slewing cylinders,
1.4 m (4,6 ft) extension.
Lifting torque.....125 kNm (92 200 lbt ft)
Torque.....35,8 kNm 26 400 lbf ft)
Angle of rotation.....375°
Reach.....7,1 metres (23,5 ft)

WEIGHT & CARRYING CAPACITY
Service weight.....18 500 - 19 500 kg (40 800-43 000 lb)
Load capacity.....13 000 kg (28 700 lb)

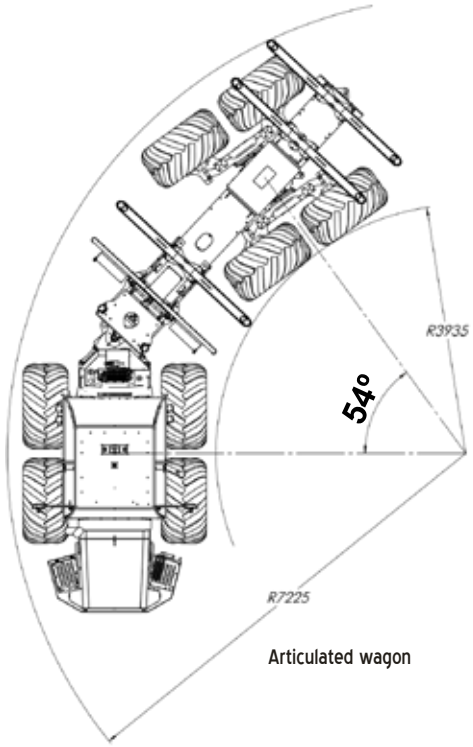
EQUIPMENT
Engine/cab heater with heating coil for hydraulic tank.
Sprinkler. Green oil. Reversing camera. Xenon working light.
Sunblinds. Dozer blade. Comfort Line cab suspension.
Balansing bogie system. Mobile telephone.
Forwarder computer. GPS/Gis. Mobile broadband.

Specifications and equipment are subject to alteration.

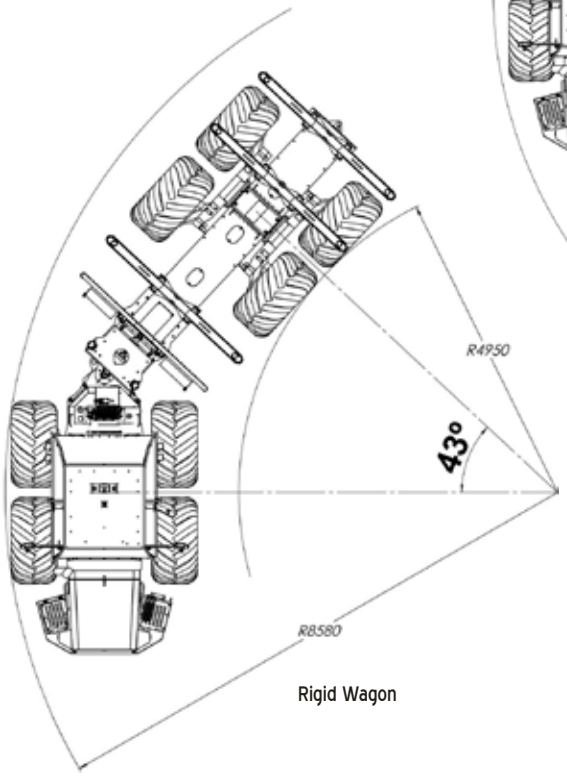
Images do not always show the machine in its standard design.

Increased steering angle

The articulated wagon increases the machine's steering angle from 43° to 54°, which means that this medium-sized forwarder takes up no more room than a small thinning forwarder.



Articulated wagon



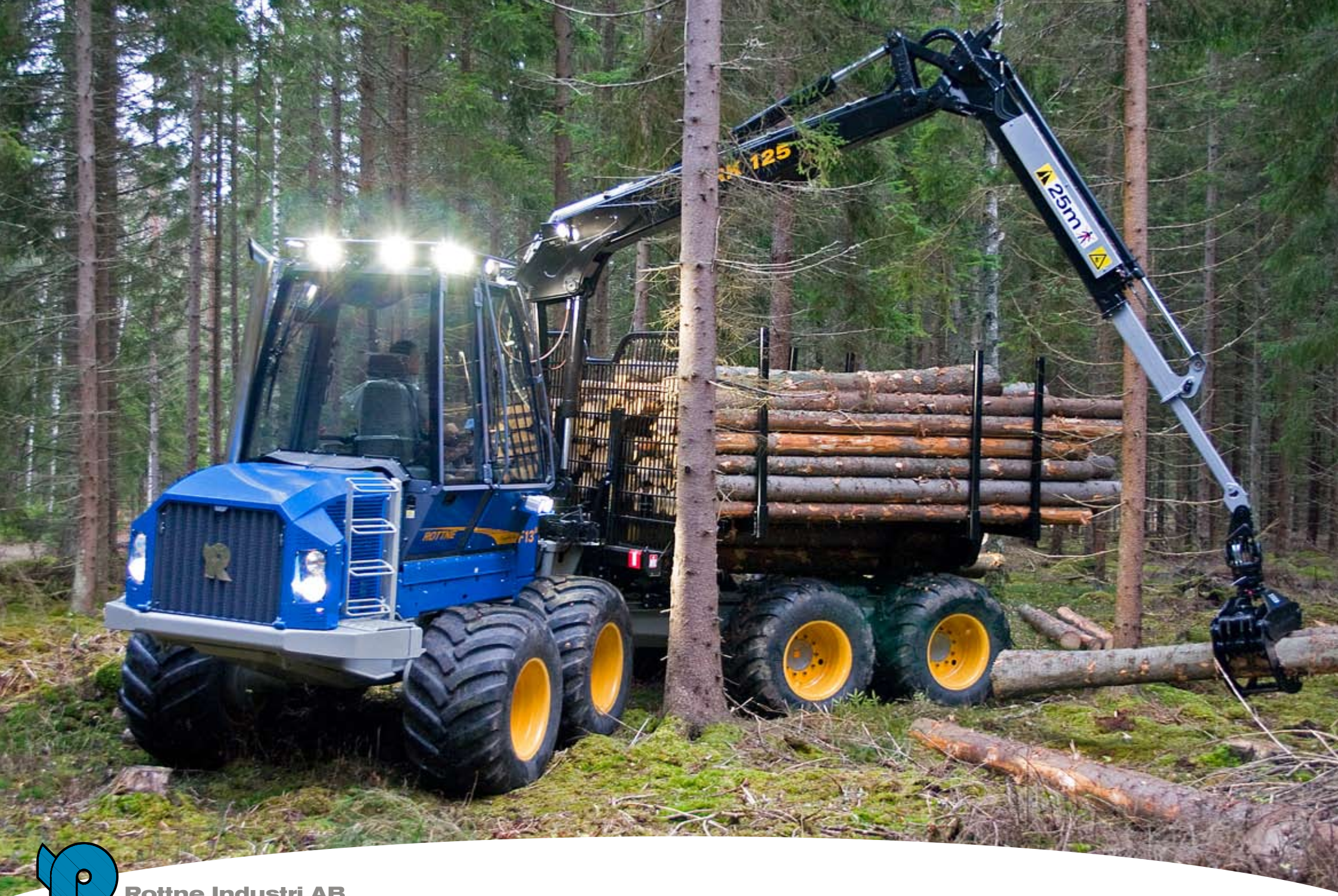
Rigid Wagon

Rottne F13^{S} – a new forwarder with articulated wagon

Rottne F13^{S} is a forwarder with 8 wheels and unique articulation of the wagon bogie that gives the machine superb flexibility. Wagon steering is normally linked to the forwarder's frame steering but it can also be controlled separately via a joystick. As the wagon can be controlled separately, the forwarder is easier to manoeuvre when being reversed along a strip road.
When frame steering and wagon steering are synchronised, the tractor vehicle and wagon follow identical paths, which reduces the risk of driving damage along strip roads.

Rottne F13^{S} has a powerful chassis that can cope with the demands of heavy final felling, but it is also ideal in tight, dense thinning areas because of its unique wagon steering, which ensures a large steering angle and precise tracking.

The articulated wagen gives the forwarder unique tracking performence



Rottne Industri AB
www.rottne.com