



**UNITRAC** 112 *L*DRIVE

*Lindner* 



## Everything begins with a vision

When our grandfather, the engineer Hermann Lindner, began to build tractors 70 years ago, he used technical innovations to ensure the existence of farmers and to carry out municipal tasks, above all winter road clearance. In 1963, the first transporter was introduced to allow working with an even greater payload. It soon became apparent that the robust design of our vehicles, necessary for farming in mountainous areas, was also ideally suited to municipal use. Even today, we still embody the pioneering spirit of our founder and have combined the experience of our 40,000 customers from agriculture and municipal use in a modern vehicle. The Unitrac 112 LDrive, up to now the most intelligent transporter from Lindner, is an example of innovative thinking and efficiency. With it, we help customers to be productive and provide pleasure in a job well done.



### More than just a transporter

Throughout Europe, approximately 3,000 Unitrac transporters are currently in service. With over 10,000 matching implements, the Unitrac system is at work all

year long in municipal service, for cable car operators and in agriculture. The design is based on the stringent requirements of particularly-hard continuous use, day and night.



**Easy operation, manoeuvrability and tractive power combine to form the perfect equipment carrier.**

The stepless traction drive, rear and front PTO shafts and the working hydraulics with variable displacement pump make the Unitrac the ideal equipment carrier for any winter road clearance duties. Gritting and sweeping tasks as well as snow clearing with a conventional or a rotary snowplough is child's play with the 4-wheel steering, even in narrow alleys. 5,000 kg payload and good tractive power make heavy transportation work possible.





Tools-free tipping

## Tiltable comfort cab

The complete cab can be tilted 50° to the side to provide a high degree of maintenance friendliness. Thanks to the tools-free hydraulic tilting mechanism, the engine and gearbox compartment are freely accessible in just a few steps.



## Ergonomic interior

The steering wheel can be individually adjusted for height and angle to suit the driver. The central information panel provides a clear overview of important vehicle information and control displays. Other information such as the total and daily operating hours or the time of day can be read from the additional IBC monitor. All control levers and switches are placed around the driver in an optimum manner. The switches and displays in the Unitrac are illuminated.



## LDrive comfort seat

The air-suspension seat in the Unitrac 112 LDrive with 8-way adjustment offers maximum safety and comfort. The high backrest with head restraint and integrated 3-point seat belt together with the low frequency air suspension relieve the back during prolonged use. Seat heating provides warmth in winter.

## Corrosion protection

The entire vehicle chassis and the comfort cab are painted using a particularly high-resistance cathophoretic immersion priming process. Battery box, fuel tank and optionally available tool boxes are made from corrosion-resistant plastic.



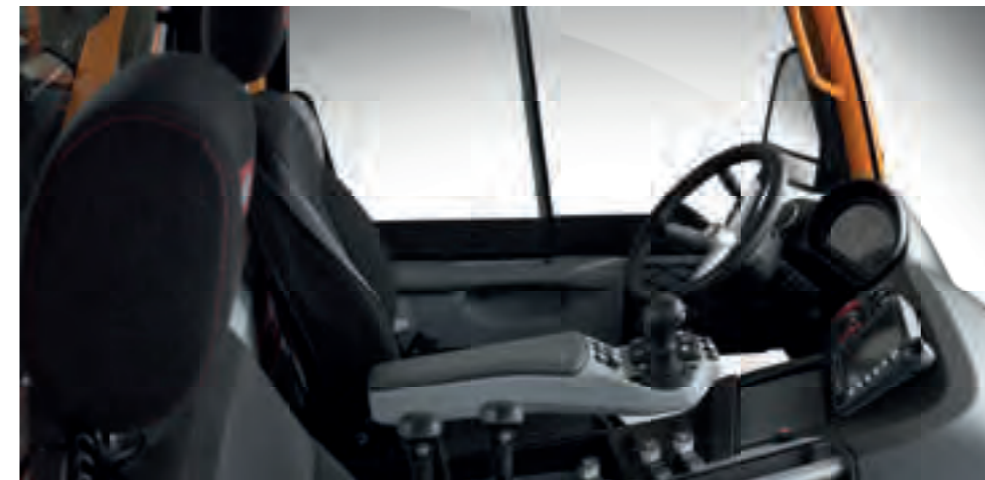
## IBC monitor

The driver has an overview of important equipment information on the IBC monitor: axle load, gross weight equipment status are determined via the TRAC Link system. Instructions, vehicle or hydraulic settings as well as images of the reversing and side cameras are displayed as required.



## Optimum all-round view:

You have everything in your field of vision: the front working area through the heated panoramic windscreen, to the side an unobstructed view through the large glass doors with wide-opening sliding windows. The rear-view mirrors with integrated additional turn signal indicators can be adjusted electrically and are heated.



## Cab mounting

The comfort cab is mounted on 4 hydro-rubber elements and is thus particularly vibration-resistant. A quiet working place results from enclosure of the cab. Comfort as you know it from a passenger car.



## Cable opening

A special cable opening is a standard feature of the Unitrac. With this, various cable connections can be fed into the cab without disturbance from water, dust or noise.

## Comfort equipment

The roomy comfort cab is accessed easily through the wide-opening doors. The automatic door function opens the rear window upon entry, facilitating soft door closure with optimised cab ventilation. The non-slip storage compartments and nets are practical, as are the large drink holders in the centre console.



## Roof console

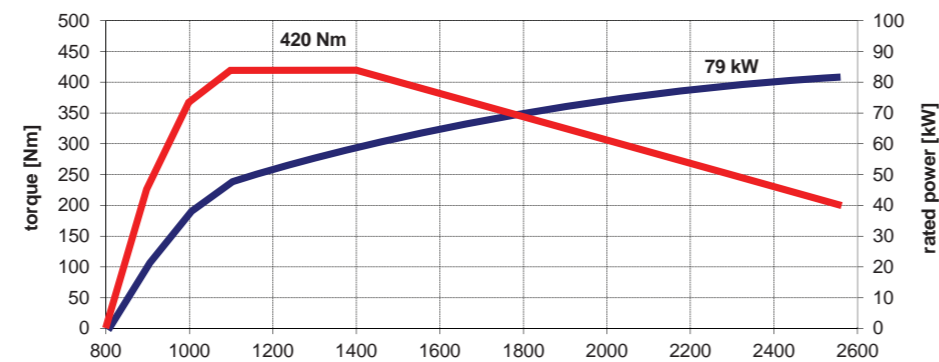
Radio and tachograph positioned in the roof console for easy access. Storage compartments for vehicle papers or sunglasses can be found behind the sun visors. In addition to the interior lighting, reading lights are integrated for the driver and passenger. The stepless automatic air conditioning system provides an optimum working climate.



## Engine

The 4-cylinder turbo diesel engine in the Unitrac 112 LDrive has an output of 79 kW/107 HP at 2300 rpm and generates 420 Nm of torque between 1100 and 1400 rpm. The engine, which has a cylinder capacity of approximately 3 litres, and runs particularly quietly, fulfils the exhaust gas criteria of EURO 6. The Unitrac 112 LDrive is thus particularly environmentally friendly and has received the "green label" for inner cities in Germany.

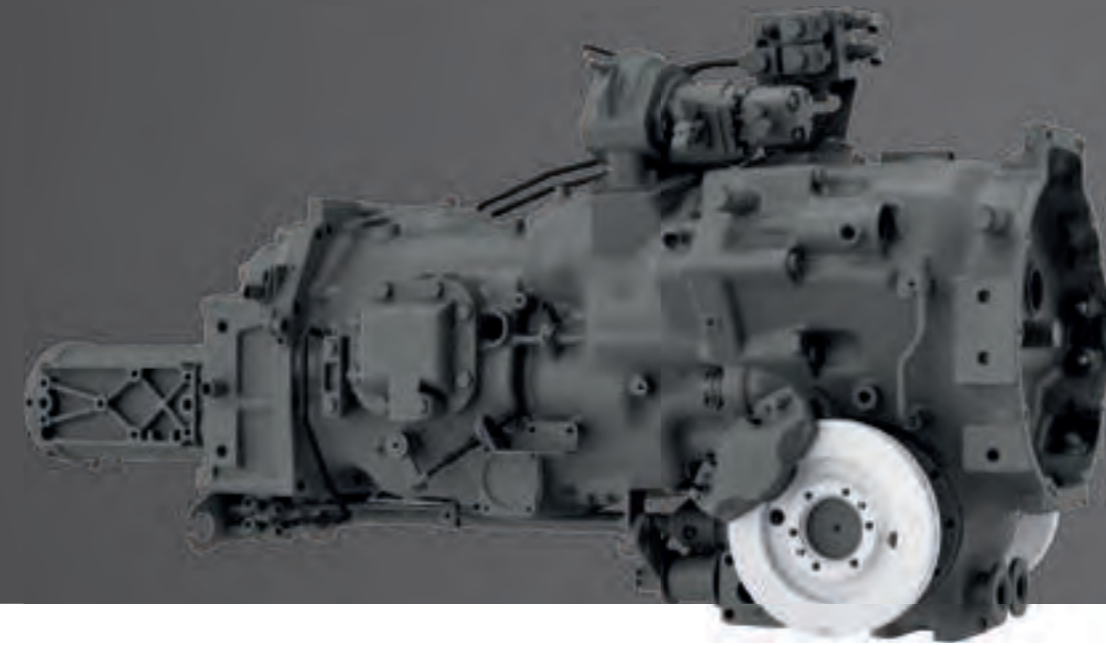
### Consumption-optimised peak performance



Due to the exact monitoring of inducted air and engine temperatures, particularly precise fuel injection is possible. This high-performance engine is characterised by optimum power delivery and low consumption. The engine is particularly service-friendly due to 2-valve technology and maintenance-free hydraulic tappets and closed crankcase ventilation.

### Trouble-free particulate filter

The exhaust gas after-treatment system in the Unitrac 112 LDrive comprises two modules. The particulate filter system (DOC & DPF) which is located directly in the engine compartment, collects 99.9% of the fine particulates. The maintenance-free filter system regenerates automatically. In the downstream SCR system behind the cab, the exhaust gas treatment process is completed with AdBlue.



## Gearbox

The stepless CVT transmission used in the Unitrac 112 LDrive was developed together with ZF and produced by Lindner. Thanks to the mainly mechanical transmission of power with low hydrostatic proportion in the working driving range, the gearbox works particularly efficiently.

A continuously variable driving speed is possible from -20 to +50 km/h at reduced engine speed.

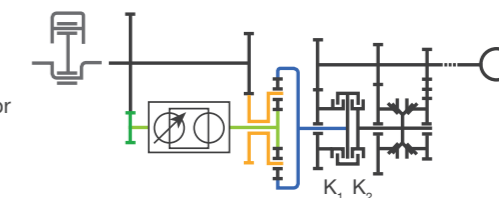


### Foot accelerator mode for front-mounted equipment

In foot accelerator mode, which is known from transporters with manual transmission, the engine speed depends directly on the accelerator pedal. Nevertheless, the driving speed can be kept constant – this function is particularly practical for mowing or snowploughing activities.

### Fine control and creeping

In creep mode, the foot pedal and the LDrive spread can be set to 15 km/h at the press of a button. In this way, the driving speed can be controlled extremely exactly when performing snowploughing or mowing tasks.



### Hydrostat with power splitting

The secret of the efficiency of the stepless Lindner CVT transmission lies in its predominantly mechanical transmission of power. The multiply-split power-shift transmission is supplemented with a compact and frugal 45 cc hydrostat.



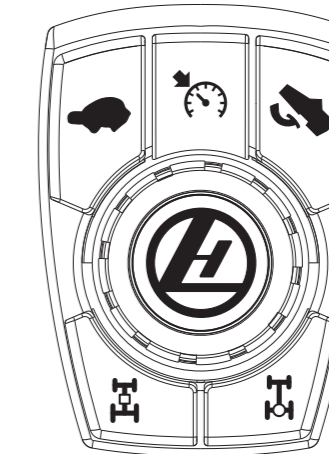
## LDrive operation:

**the simple rotary control makes every driver a complete professional**

It is easy to drive the Unitrac 112 LDrive: start the engine, select the direction of travel, accelerate and steer. And for particularly efficient working, use the LDrive rotary control on the armrest. If "LDrive" is active, the driving speed is set dynamically and infinitely variably by turning the control. Quick-selection buttons are available for important chassis functions and driving modes.

## All driving functions under control

The most important driving functions are combined in the LDrive controller: function buttons for creep mode, cruise control and floor accelerator mode are at the front. The rear buttons activate the all-wheel drive and differential lock. LDrive is activated by pressing the rotary control. In this way, the driving speed of the Unitrac can be accelerated or braked with infinitely variable control. The spread of the driving speed can be set via creep mode (e.g. 10 km/h).



## Overview of the Lindner IBC monitor

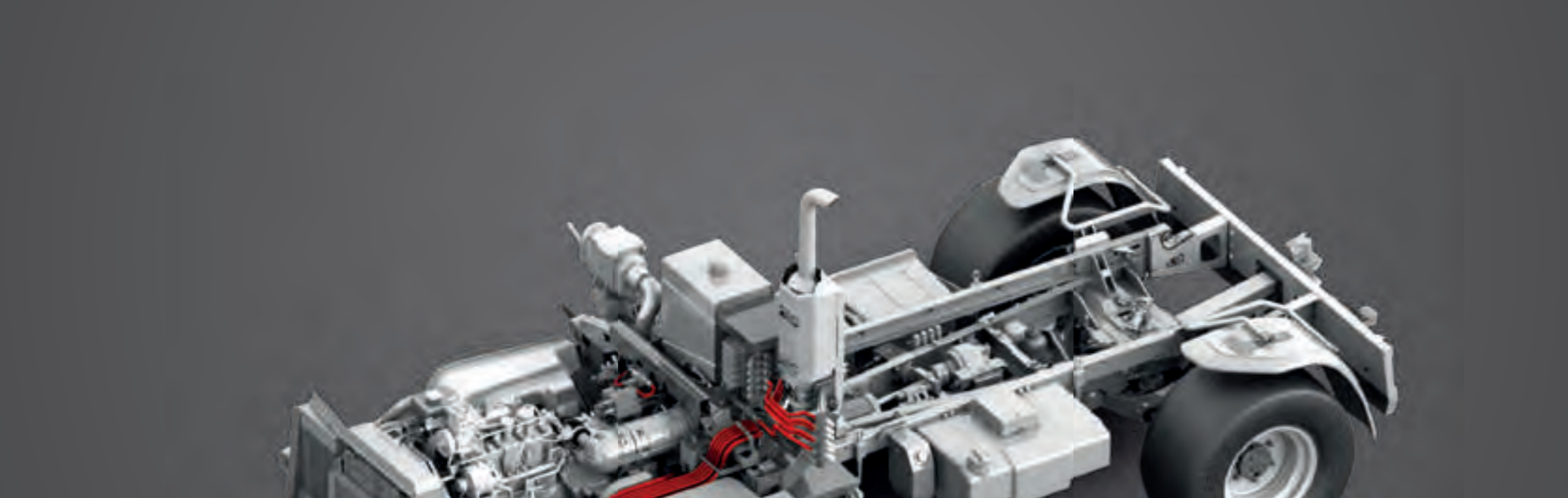
All important information about the vehicle and TracLink mounted equipment is shown in the driving view of the IBC monitor. The driver can select from different views: hydraulic side, vehicle settings, instructions, service display, cameras or operating data. In addition to the rotary wheel with confirmation button on the monitor, the radio control on the LDrive armrest can also be used for selecting the menu or performing fine settings.



## Always the right driving mode

The Unitrac 112 LDrive always starts in the normal driving mode "drive" with generally suitable values for acceleration and engine performance. If the LDrive controller is pressed forwards or backwards, the next driving mode is selected.

Eco mode is particularly frugal. Power mode is optimised for particularly heavy-duty applications. All values of Pro mode can be individually adapted by the driver for their working requirements.



## Working hydraulics with variable displacement pump

The Unitrac 112 LDrive works with an axial piston pump, which infinitely variably regulates the hydraulic output up to 88 l/min. The required volume of oil for the working circuits is always delivered, thus eliminating power loss. Up to 5 EHS control units and an EWS control unit with quantity presetting are possible. These work proportionally and are particularly

sensitive. Fine setting of the hydraulics is performed via the IBC monitor. As with all Lindner vehicles, the Unitrac 112 LDrive also has an oil circulation system separate from the working hydraulics / steering and gearbox with separate cooling systems. A hydraulic output of 50 l/min is fully available from just 1,300 rpm engine speed.

### Front circuits

The front hydraulic circuits are operated conveniently via a joystick. For this purpose, the front installation space is equipped with 2 double-action EHS control units (proportional, with floating position). If a snowplough or a front hydraulic is mounted on the attachment bracket, then these can be operated with the joystick using one hand. For example, mowing equipment or snowploughs can be powered in combination with the front PTO shaft.



### Operating assistance via TracLink

When changing equipment, the TracLink system detects new attached equipment and indicates in the IBC monitor which connections are to be used by the equipment, which functions are operated and how, and with what hydraulic volume optimum utilisation results can be attained. In this way, even inexperienced operators can work like professionals.



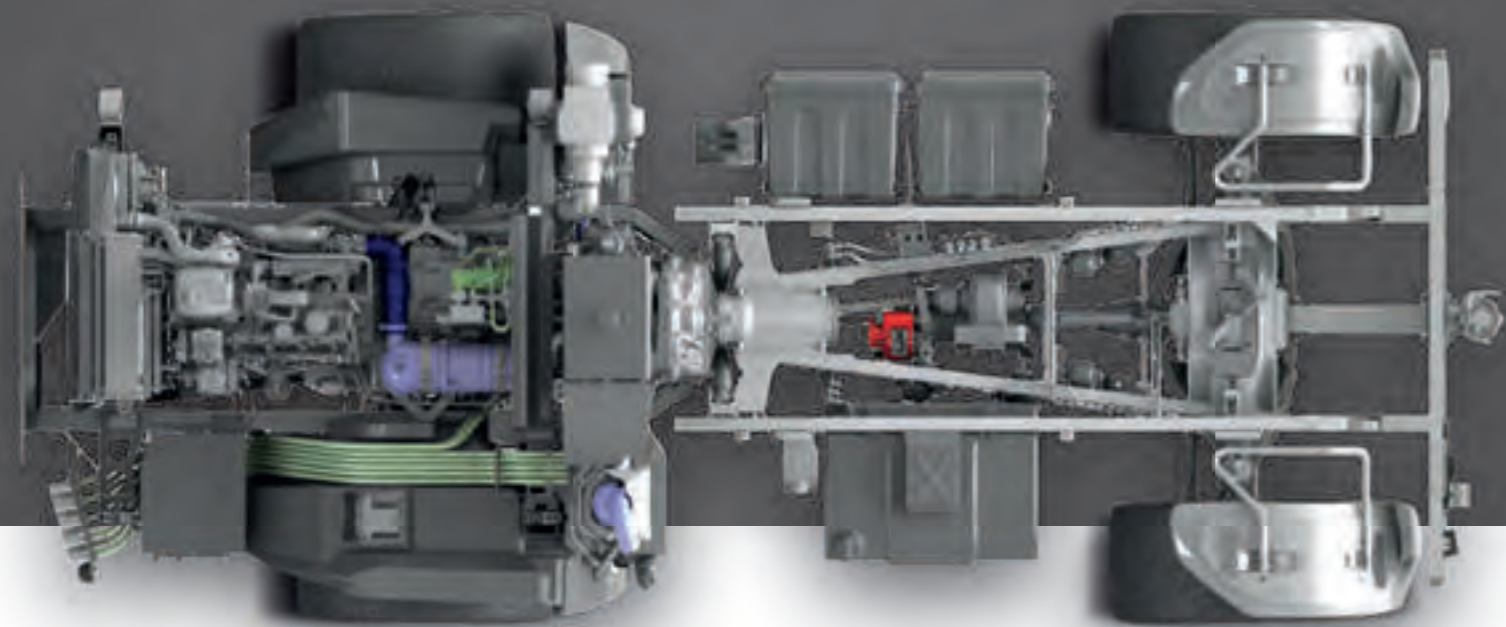
### Rear circuits

As standard, 3 control units are provided for the rear hydraulic circuits: 1x EWS and 2x EHS (DWS), that are also used as a hydraulic motor, e.g. for scraper / gravel spreader drives. Operation is carried out by fingertip on the control console or via the joystick. In total, up to 6 hydraulic control units (1x EWS / 5x EHS) can be installed.

Operation of the hydraulics is easy to comprehend due to coloured labelling of all connections, switches and joystick assignments.

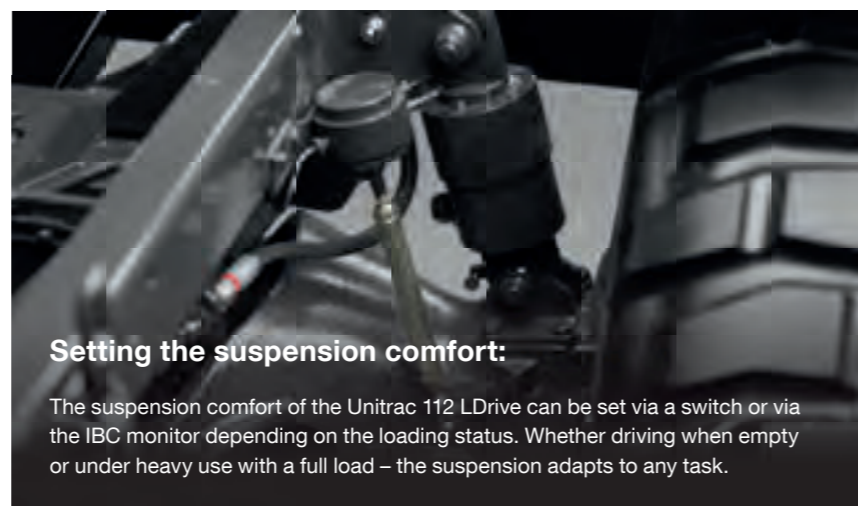






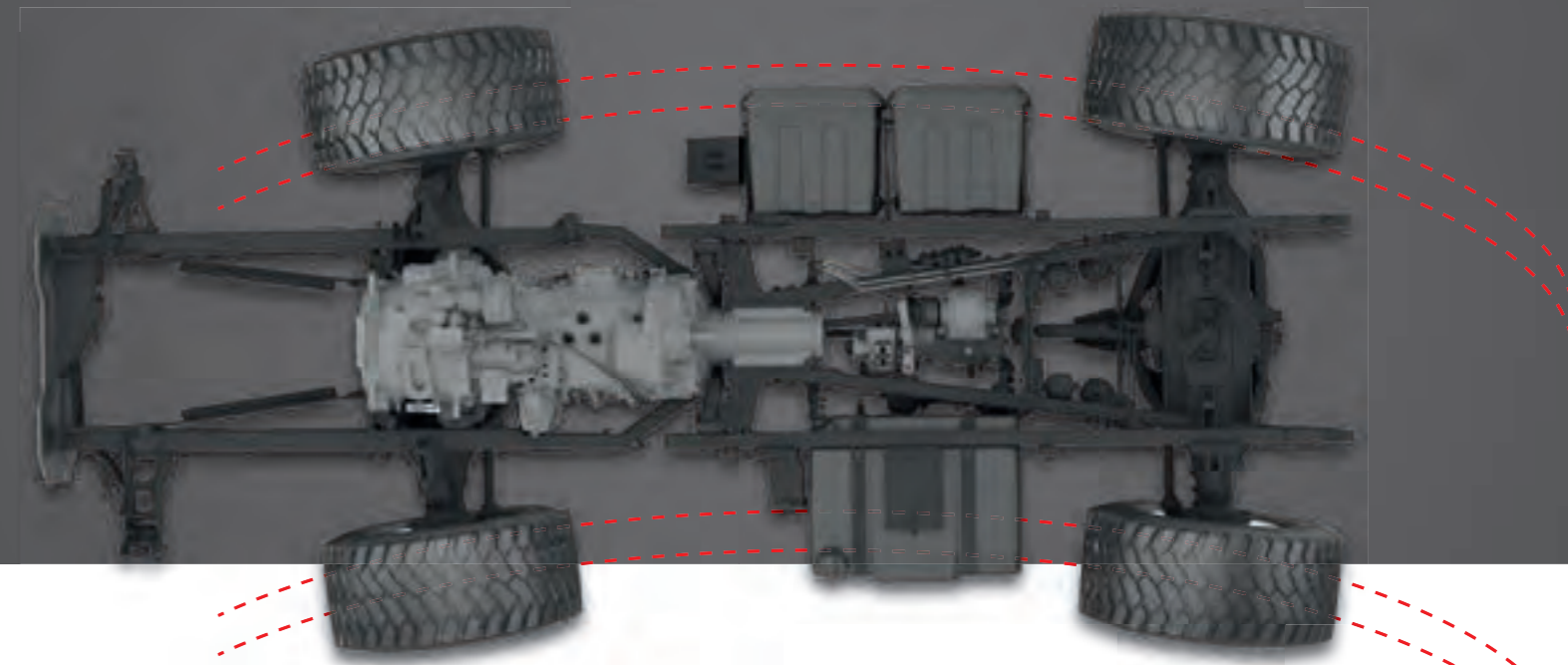
## High-performance chassis:

The Unitrac chassis concept has already proved itself in more than 3,000 vehicles, in meadowland farming, with cable car and industrial customers and as a municipal service vehicle. Together with the rotating part between the front and rear chassis, independent suspension and hydraulic suspension cylinder with diaphragm accumulators guarantee optimum suspension comfort with the greatest possible off-road capability. Thanks to the rotating chassis, all four wheels are in constant contact with the ground and offer the highest possible traction. The standard mechanical level regulation provides the highest tipping stability on difficult terrain. As a result of the system's relatively short suspension travel, the upper edge of the load bed is particularly low in spite of large tyres being fitted.



### Setting the suspension comfort:

The suspension comfort of the Unitrac 112 LDrive can be set via a switch or via the IBC monitor depending on the loading status. Whether driving when empty or under heavy use with a full load – the suspension adapts to any task.



## 4-wheel steering:

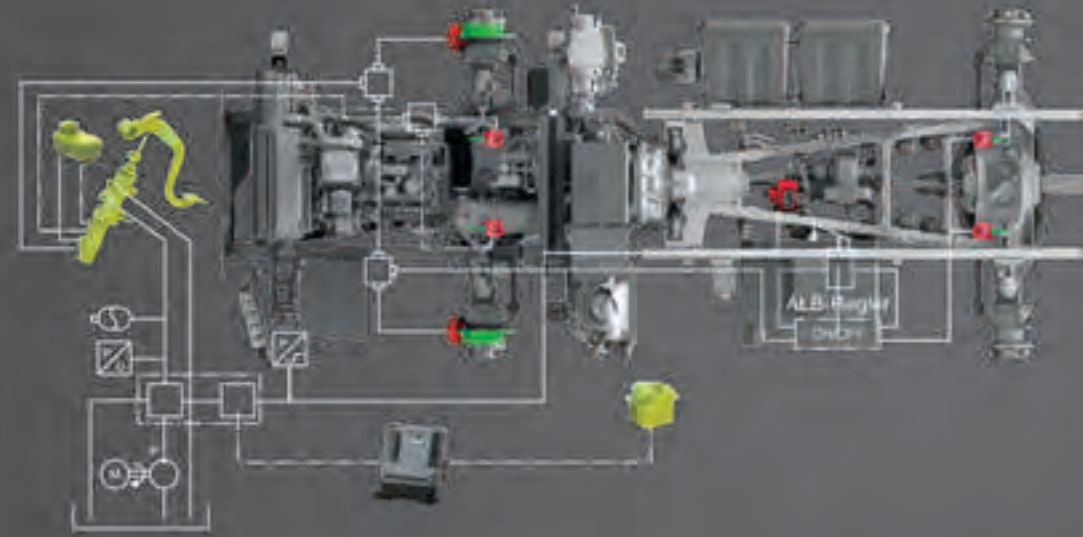
The Unitrac 112 LDrive is available with an optional 4-wheel steering system. With this, the turning radius is just 6 m (3.5 m with 4-wheel steering). If desired, a crab-steering mode is available. Operation is easy and convenient due to the convenience reset and the display on the IBC monitor. The 4-wheel steering system can be switched off in any wheel position. The system automatically locks the rear axle as soon as the wheels return to the zero point. Various audible signals inform the driver of hazardous situations. This means that even inexperienced vehicle operators are always safe on the road.





**Easy operation, manoeuvrability and tractive power combine to form the perfect equipment carrier.**

The stepless traction drive, rear and front PTO shafts and the working hydraulics with variable displacement pump make the Unitrac the ideal equipment carrier for agriculture, cable car professionals and municipal work all year round. Thanks to the independent suspension with level regulation, a front reach arm with embankment mower can be operated at the front without a stabiliser wheel.



## Brakes

As standard, the vehicle is equipped with a 2-circuit braking system with internally vented disc brakes at the front and rear. Less pedal pressure due to the brake booster and reduced heat build-up increase comfort and safety. The Unitrac can optionally be equipped with an eddy current brake. The Unitrac 112 LDrive is available ex works with a compressed-air braking system or hydraulic trailer brake.



## Intelligent light

The Unitrac is equipped with LED rear lights and daytime driving light rings. The light-emitting diodes have particularly low energy consumption and, with a service life of more than 20,000 operating hours, will last for the life of a tractor. The Unitrac has powerful full LED headlights for daytime driving and dipped beam lights, which are ideally suited to night use with their high illumination. If desired, powerful LED work lights are available.

### Parking brake

The Unitrac 112 LDrive is equipped with an intelligent electro-hydraulic parking brake with spring mechanism. Depending on the utilisation situation, this serves as an aid for setting off, for example on a slope, or as a parking brake. Operation is via the parking pushbutton on the centre console.

- Internally ventilated disc brakes
- Brake booster
- Electro-hydraulic parking brake

Optional:

- Eddy current brake
- Compressed-air brake
- Hydraulic trailer brake



### LED warning lights

For municipal use, highly visible LED rotating beacons and lighting bars are used. LED warning lights on the impact beam are fitted as standard on the municipal-use version.





## The Unitrac equipment system

The four attachment points of the Unitrac enable many different application possibilities. A payload of up to 5,750 kg and a trailer load of 10,000 kg also make the Unitrac 112 LDrive ideal for heavy-duty transportation work – with full off-road capability. The engine power can be transferred to the drive unit via front, middle or rear PTO shafts so that the widest variety of attachments can be used. The 88 l/min output of the multi-circuit hydraulic system with variable displacement pump is available as standard via single-action or double-action EHS control units. Maximum hydraulic performance is available from an engine speed of just 1300 rpm. The sequence of oil supply to the control units can be prioritised. Time control and quantity presetting are standard. In this way, the Unitrac can be individually adapted to the respective use.



### Axle load check on IBC monitor:

The Unitrac shows the driver the currently detected axle load for front axle and rear axle as well as the current gross weight on the IBC monitor. In addition, the TracLink system can also be used to display the current fill state of the installed equipment such as e.g. a gritter.



# Attachment points / utilisation options

- 1** • Front hydraulics • Snowplough • Rotary snowplough • Embankment mower (front reach arm) • Front cable winch, front sweeping brush, ...
- 2** • Centre crane • Cable winch • Embankment mower, ...
- 3** • 3-side tipper • Attached sweeping machine • Load bed • Automatic spreader • Roll-off tipper • Skip • Hook loader, loading vehicle, ...
- 4** • Rear crane • Rear hydraulics • Trailer (towing capacity 10,000 kg) • Shredder, ...



Equipment	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
Front hydraulics	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Front mower	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey	Grey
Embankment mower	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey	Grey
Cable winch	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Snowplough	Blue	Blue	Blue	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue
Rotary snowplough	Blue	Blue	Blue	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Blue
Tipper	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Rear hydraulics	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Loading vehicle	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey
Fine spreader	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey
Sideways spreader	Grey	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey
Combi tank	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sweeping machine	Grey	Grey	Grey	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Grey
Hook device	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Roll-off tipper	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Centre crane	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Gravel spreader	Blue	Blue	Blue	Blue	Grey	Grey	Grey	Grey	Grey	Grey	Blue	Blue

• = All-year use    • = Summer use    • = Winter use



# TracLink

The Lindner TracLink system makes the Unitrac 112 LDrive the most intelligent vehicle in its class: TracLink supports the operation of all attached implements. The electronic logbook simplifies maintenance and documents the use of equipment and routes. TracLink provides an optimum overall view of costs and fuel consumption data.

## 3 years' warranty – or longer if desired

The intelligent TracLink equipment detection ensures that optimally-tuned equipment is used that is operated with the right hydraulic volumes and PTO shaft speeds. Incorrect operation is prevented as an operating aid relating to the corresponding attached equipment is shown on the IBC monitor. TracLink helps with maintenance by providing a reminder of important inspections or service work (e.g. oil change). This is why Lindner provides a 3-year warranty as standard for the Unitrac 112 LDrive with TracLink. This can be optionally extended to a warranty of up to 6 years.



## Integration of TracLink system partner

It is possible to integrate many common operating terminals from equipment manufacturers into the TracLink system. In this way, even elaborate sensors can be integrated into the equipment, e.g. for spreader quantity checking or road temperature detection.



## TracLink portal for optimum deployment planning

The TracLink portal presents all information transmitted by the UNITRAC telematics in a clear manner. Independently of whether you are in the office or working on a mobile terminal device. All journeys are shown clearly on a map including important deployment information – in real time. TracLink creates a digital logbook. You can see current important consumption values, utilisation data and fill quantities of operating material or grit. They provide early detection of maintenance breaks and can plan your deployments in an optimum manner. Work with TracLink for as-yet unequalled economic efficiency!

## TracLink looks after your deployment documentation

The TracLink portal provides you with comprehensive area and customer management. Define deployment areas for your district or other customers on the map with just a few clicks. You concentrate on the work and TracLink evaluates the electronic logbook for you afterwards. In this way, for example, monthly invoices for winter road clearance activities can be created without problem – with all important information about deployment time, cleared area and applied quantity of salt presented in a clear manner. You can create your own gritting logs in just a few steps and print them out at any time.



## TracLink in UNITRAC

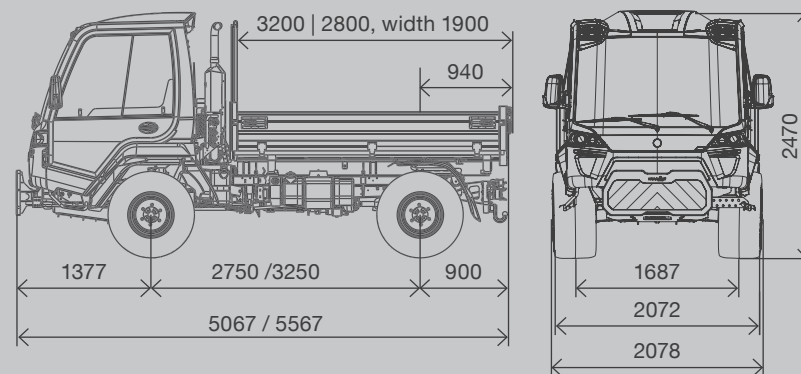
Equipment detection, connection and operating assistance, service displays and operating data of the TracLink system can be displayed and managed directly in the IBC monitor. All information that is important for driving operation is directly available in the cockpit.

## Technical details - UNITRAC 112 LDrive first edition

<b>Tiltable comfort cab:</b>	hydro anti-vibration, open-view comfort cab with doors (OECD tested), tiltable to the side, deep-drawn heated panoramic windscreen, electrically adjustable and heated side mirrors with integrated turn signal indicators, top and bottom indicators can be operated by light switching, 2 windscreen wipers with intermittent switching, comfort seats with 3-point seat belt, sun visor, radio console with radio pre-installation, 12 volt mobile phone socket, indicator resetting, heating, 3-speed blower fan, door locks, ergonomically-formed operator panel, VDO central information board & IBC monitor, LDrive armrest on the LDrive comfort air seat, interior lighting, comfort access
<b>Engine:</b>	107 HP (79 kW) in accordance with 60D/2, 4-cylinder VM turbo diesel engine with common rail injection and SCR particulate filter with AdBlue (EURO 6), 2,970 cc cylinder capacity, 420 Nm at 1100 to 1400 rpm, LEVEL 4, water-cooled, dry air filter with visual maintenance display, 12 volt electrical system, three-phase alternator, electric main battery switch, fuel tank volume: 100 l diesel + 20 l AdBlue
<b>High-performance suspension:</b>	independent suspension, hydraulic suspension system with level regulation, inter-axle differential lock and rear differential lock electro-hydraulic at the press of a button, optional: front differential lock, 4-wheel steering with comfort reset, adjustable suspension comfort, axle load display for front and rear axle
<b>Transmission:</b>	Lindner ZF continuously variable transmission, 0 - 40 or 0 - 50 km/h, PTO shaft coupling electro-hydraulic at the press of a button, rear / centre PTO shaft: 540/1000 rpm, optional: front PTO shaft 1000 rpm;
<b>Brakes:</b>	2-circuit braking system, front and rear ventilated disc brakes with brake servo, parking brake with spring accumulator, optional: eddy current brakes (L), 9,500 kg maximum permissible total weight
<b>Hydraulics:</b>	multi-circuit hydraulic system with variable-displacement pump (oil volume max. 88 l/min, 200 bar, load sensing system, 45 l, removable volume: 35 l)
<b>Control units first edition as standard:</b>	front: 2x double-action proportional EHS control units with float position; rear: 2x double-action proportional EHS control units with float position 1x single-action proportional control unit with float position; all control units with adjustable flow rate, time control (hydraulic motor), priority assignment
<b>Standard tyres First edition:</b>	285/70-R19,5  <b>3 years' warranty incl. TracLink</b>

## Equipment package

4-wheel steering and rear axle adjustment (crab steering), torsional damping, municipal colour orange RAL 2011, driver and passenger seat air sprung with high seat backrests and seat heating, 3-point seat belts (2x), additional wide-angle mirrors on standard side mirrors, air conditioning system, radio with CD player / USB / Bluetooth (hands-free system), reverse light + acoustic signal (can be deactivated), LED rotating beacon on left height-adjustable, LED warning lights on abutment beam, reversing camera on abutment beam & side camera / side camera on right (working area of sweeper brush) - display in IBC monitor, socket on abutment beam, Rear control units: 1x SAF & 2x EHS (DWS) incl. connections, control units Front: 2 x EHS (DWS) with 4 lines + RL, incl. joystick and mounting bracket, tyres 285/70-R19.5 DUNLOP SP 444, mounting bracket EURO3/VSSB/SETRA, abutment beam, abutment beam on chassis of vehicle (incl. lighting, auto. reverse light + 7-pin socket), rubber mudguards on chassis, 2 tool boxes mounted on chassis, full LED main headlights with integrated LED daytime driving lights, automatic trailer towing hitch (10,000 kg) incl. Vario Block, signal socket in console



Tare weight:	max. payload:	
Empty weight: 3.475 kg	6.025 kg	Permitted gross weight: 9.500 kg
First edition: 3.750 kg	5.750 kg	Permissible front axle load: 4.600 kg
with tipper: 4.450 kg	5.050 kg	Permissible rear axle load: 5.000 kg