

Leeb TD



INTELLIGENCE AND EFFICIENCY



Leeb TD

Intelligent two-tank concept with optimum drawbar load distribution

- Intelligent and independent control of the two mixture tanks for drawbar load optimisation
- Less drift and high operational speeds due to active boom control system and low target area spacing

- High efficiency due to the 12 000 l mixture tank
- Large tyres up to Ø 2.19 m are possible to maximise soil protection and to maintain the low horsepower requirement

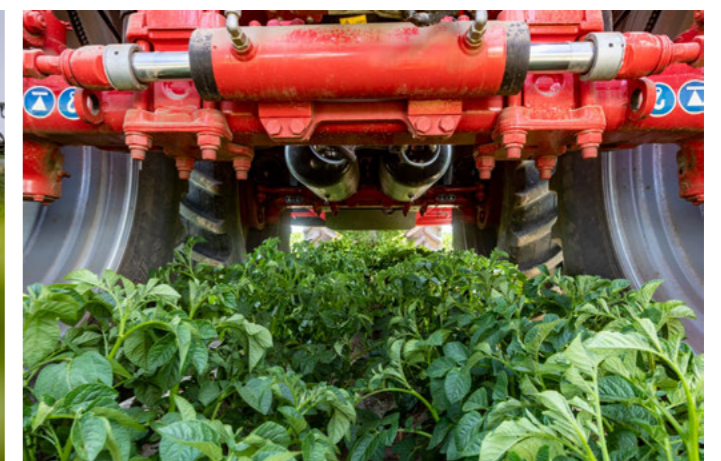


The HORSCH Leeb 12 TD meets a wide range of requirements on a state-of-the-art plant protection sprayer. It combines a large tank capacity with a high manoeuvrability, an intelligent control of the drawbar load to solve the problem of the weight transfer on tandem axle sprayers and includes all the advantages of a Leeb sprayer.

The large tank capacity of 12 000 l meets different requirements. The Leeb 12 TD is ideal for farms that have to cover large farm-fields distances and that do not have the necessary logistics and therefore use the sprayer or for farms that have to apply high quantities of water or liquid fertiliser. The huge advantage is that the Leeb 12 TD regulates the liquid level in the two independent tanks individually. The liquid is then applied. First the rear tank is emptied and then front tank. The drawbar load on the rear axle of the tractor is thus maintained. This way, small tractors can be used for the Leeb 12 TD resp. no additional weight has to be added. This protects the soil and improves manoeuvrability. The tandem axle unit has a maximum steering angle at the rear axle of 28° also ensures a good manoeuvrability. To efficiently reduce tracks and protect the soil, the Leeb 12 TD is equipped with a special steering of the axle unit. The front axle of the sprayer follows the rear axle of the tractor and the rear axle of the sprayer follows the front axle of the tractor. Of course, the active boom control system BoomControl is also standard with the Leeb 12 TD.



Outstanding manoeuvrability and stability with large diameter tyres and low centre of gravity



Large clearance with tyres up to Ø 2.19 m

CONDITIONS OF USE



- Two-tank concept for better traction in difficult terrain as first the rear tank is emptied and then the front tank. On slopes, this system prevents that the spraying mixture flowing towards the rear and that traction is lost.
- The 20 t tandem axle unit ensures utmost stability. Two options are available: the passive following axle and the actively steered tandem axle unit for a precise following in the tracks and high population protection.

- The active boom control system BoomControl combined with the 25 cm nozzle spacing ensures an optimum application and drift reduction.
- Powerful, 1 000 l/min pump for optimum performance during application and filling



Theodor Leeb

For the 12 TD it was the development objective to complement the well-known efficiency of the Leeb sprayers with an even larger tank capacity. With a capacity of 12 000 l, the TD provides capacity in the field especially in case of long farm-field distances and high water application rates. To maintain the drawbar load in complex application conditions, the two tanks and their contents are controlled intelligently.

CCS Pro

ContinuousCleaningSystem Pro

In addition to the characteristics of the CCS system, for the CCS Pro version several cleaning programs can be started easily and comfortably at the push of a button in the cabin

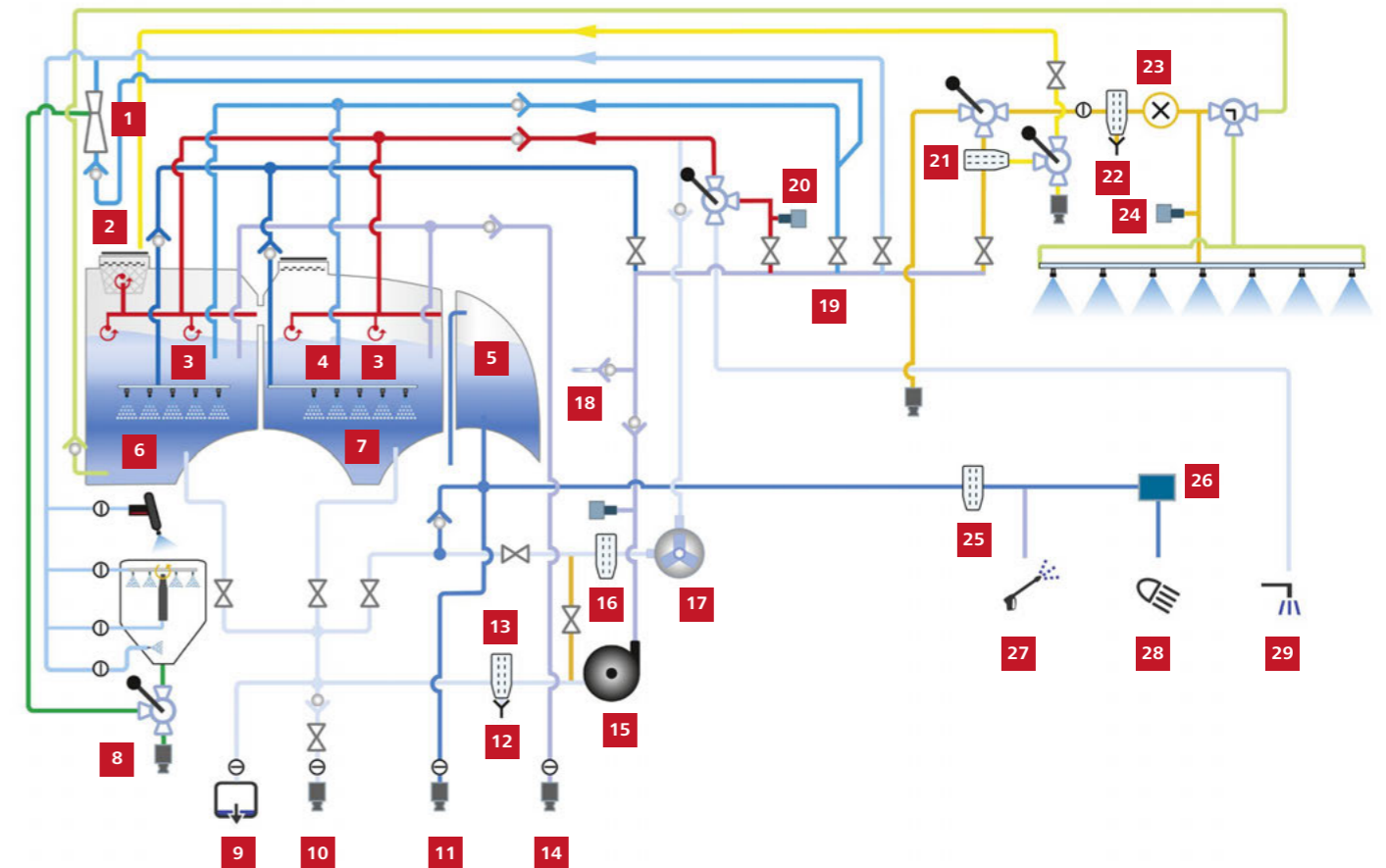
1. Complete cleaning: rinses injector line – via the filter to the boom – completely with fresh water and then continues with the continuous inside cleaning (CCS) for mixture tank and boom.
2. Dilution: dilute the spraying mixture in the desired ratio with just a few simple steps
3. Intensive washing program: recommended for an extra thorough cleaning, e.g. when changing between crops.
4. Boom cleaning: automatic rinsing of the boom, e.g. if the work is interrupted for several hours
5. Background cleaning: intelligent, continuous inside cleaning that cleans the inside wall of the tank with fresh water while spraying. This prevents deposits on the tank wall.

The pressure control in the system is carried out via the pump speed. The pump only conveys the amount of liquid that is required for spraying plus the defined quantity for the agitator and thus used especially energy-saving. Fresh water as well as mixture tank are equipped with an electric level indicator for automatic washing programs and an automatic switch-off.



ContinuousCleaningSystem Pro

Water system – CCS Pro – Leeb TD



- Continuous inside cleaning with several cleaning and rinsing programs, can be operated comfortable in the cabin
- Pressure sensors for pump, agitator, inside cleaning and boom, suction and pressure side electrically controlled
- Operation with a large external terminal with all important induction functions
- Quick cleaning process of the sprayer without having to get off
- Relaxed filling process due to the standard automatic two filling limits
- Automatic filling level dependent agitator performance and switch-off



External control terminal CCS Pro

1 Injector	11 Filling fresh water	21 1. pressure filter
2 Dome sieve	12 Discharge valve	22 2. pressure filter
3 Agitator	13 Suction filter	23 Flow meter
4 Inside cleaning	14 Direct filling	24 Pressure sensor
5 Fresh water tank	15 Rotary pump	25 Filter
6 Spraying mixture tank 1	16 Fresh water filter	26 Electric pump
7 Spraying mixture tank 2	17 Piston diaphragm pump	27 High-pressure cleaner
8 Filling sluice	18 Exhaust function	28 NightLight cleaning
9 Residual discharge	19 Electric switch unit	29 Outside cleaning
10 Suction filling	20 Pressure sensor	

Distribution system and induction hopper

No hose is the best hose

The sophisticated distribution system ensures an optimum supply of boom, intensive agitator, inside tank cleaning and induction hopper. Only one hose and one return flow hose are required for the circulation of the spraying mixture across the entire boom width, thus minimising deposits and facilitating cleaning.

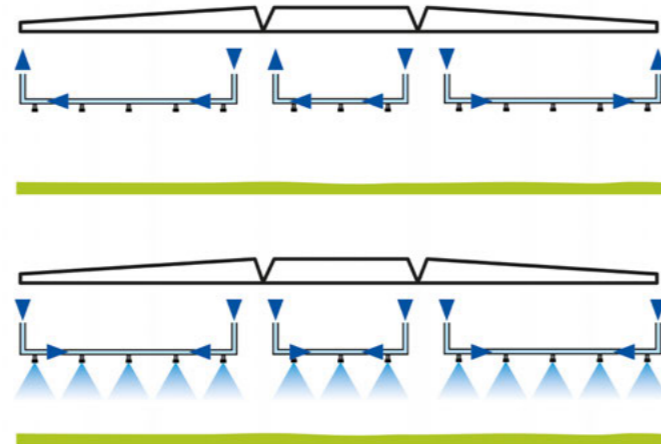
The swivelling induction hopper with a gas pressure absorber and a durable stainless steel labelling is equipped with an efficient injector filling. Upper and lower rinsing nozzles create a whirl-like circulation for quickly flushing-in liquids and are also suitable for granulate. Moreover, the induction hopper is equipped with an additional canister cleaning nozzle as well as a symbol bar with coloured control levers.

As an option, the stainless steel induction hopper pot is available with a capacity of 52 l and the additional shock nozzle.



52 l stainless steel induction hopper incl. additional shock nozzle

- Permanent circulation of the active ingredient solution
- Large tube and line cross sections for optimum circulation, no deposits and blockages
- Permanent spraying fluid at the nozzle, exact switching on and off
- Powerful induction hopper with convincing functions
- Safe cleaning: displacement of the mixture with fresh water



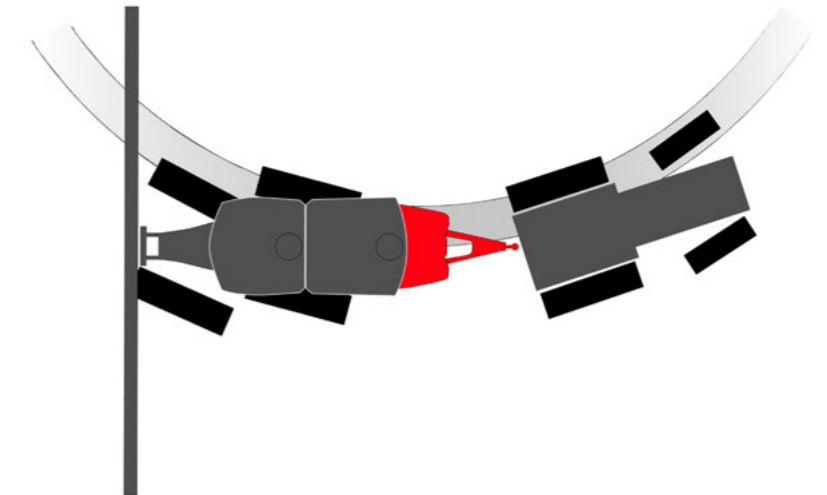
When the pump is running, a mixture circulates continuously in the boom (top) so that it is immediately available at the nozzle when spraying (bottom).

Active steering

The kingpin steering of both axles ensures a smooth boom position and a high stability. It guarantees an exact following of the sprayer in the tractor tracks and thus reduces track damage considerably. Due to the waisted frame design, despite the soil-saving tyres very large steering angles (up to 28°) with a diameter of 2.19 m are possible that make the sprayer very manoeuvrable and precise even in uneven terrain. While

steering is locked in road mode or at speeds above 16 km/h, it can manually be overridden in the cabin by means of a joystick while reversing or in field mode. When driving in one direction, steering is automatically centred again. The design with the gyroscope on the axle that does not require any sensor – and thus no calibration – is unique and a benchmark in the trailed sprayer sector.

- Kingpin steering of both axles for precise following of the tractor tracks prevents track damage in the crop
- Maximum manoeuvrability and stability in uneven terrain
- Can be overridden with the joystick in the cabin
- Gyroscope directly on the axle: no calibration required
- Integrated in machine software



Due to the tapered frame design, a steering angle of up to 28° is possible at the rear axle even with wide tyres



Maximum crop protection and exact following in the tracks



High manoeuvrability and stability with a clearance of up to 90 cm



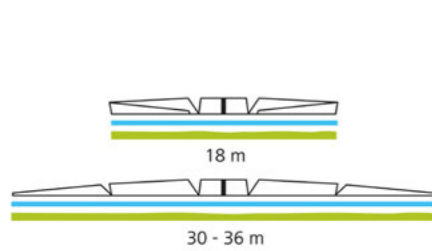
Active steering of both axles is integrated in the machine software

Boom options

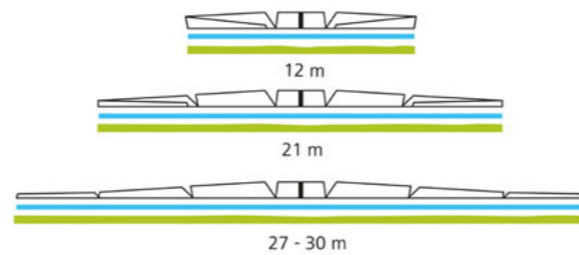
Precise technology – sophisticated to the last detail

With regard to the boom we rely on the well-proven system consisting of parallelogram suspension and the well-proven boom control system BoomControl in working widths from 24 to 45 m ensures an extremely smooth boom ride even in very uneven terrain and at high operational speeds. The patented suspension with active, pneumatic control of the middle section avoids boom dipping down when cornering

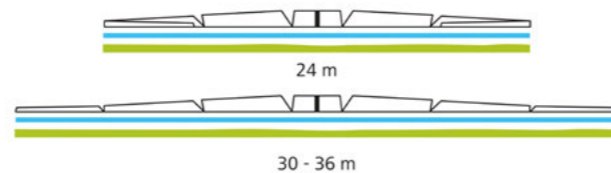
and on the headlands. The wings of the folding boom are equipped with an overload protection to guarantee safe operation at any time. The weight-optimised design made of durable aluminium profiles protects nozzles, nozzle bodies and spray lines against damage. Different folding options allow for individual solutions for every farm.



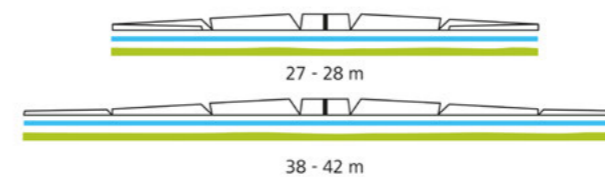
BoomControl – 5-part with reduced working width 18 m



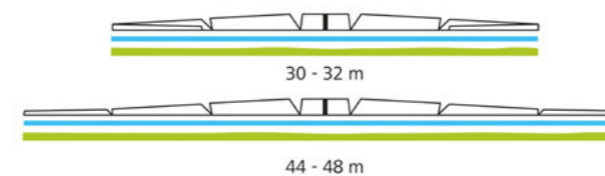
BoomControl – 7-part with reduced working width 12 m and 21 m



BoomControl – 7-part with reduced working width 24 m

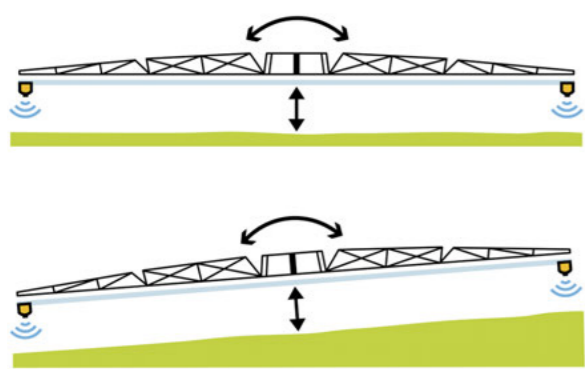


BoomControl – 7-part with reduced working width 27-28 m

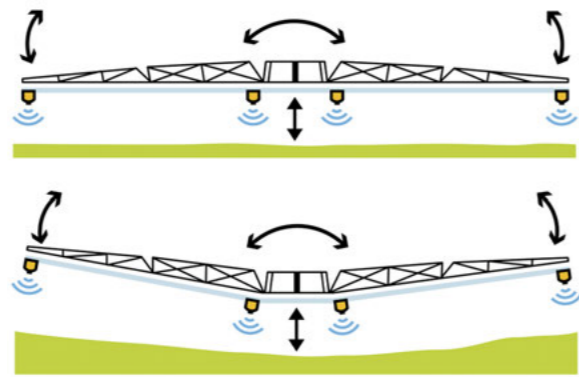


BoomControl – 7-part boom with reduced working width 30 m

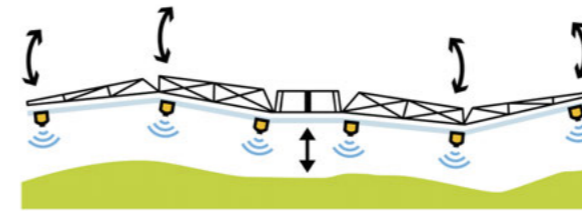
- Parallelogram suspension with BoomControl for smooth boom operation in all situations
- Basic boom versions in working widths ranging from 24 to 48 m
- Stable aluminium profile as wind and nozzle protection
- Overload protection and damping of the wings: collision protection
- Overload protection of the outside wings towards the rear, damping of the inside wings to the front and rear



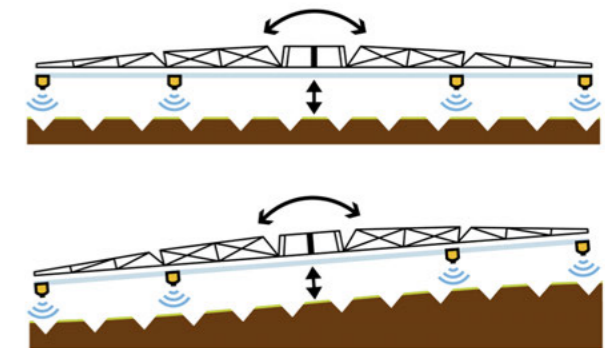
BoomControl – active adaption of the boom to the terrain due to two sensors



BoomControl Pro – active adaption of the boom to the terrain by means of four sensors



BoomControl Pro Plus



BoomControl/BoomControl Pro extension – extension of the field of vision is ideal for ridge and row crops

BoomControl

Active boom control system
BoomControl

- The precise, lowest possible working height is maintained due to automatic boom control system
- Boom control system with a target height below 40 cm ensures minimum drift
- Active adaption of the boom to the terrain due to two sensors

BoomControl Pro

Active boom control system
BoomControl Pro

- Independent angling of the boom section and the middle section to follow the terrain
- Active adaption of the boom to the terrain due to 4 sensors
- The precise, lowest possible working height is maintained due to automatic boom control system
- Boom control system with a target height below 40 cm ensures minimum drift
- Boom is completely independent from the machine

BoomControl Pro Plus

Active boom control system
BoomControl Pro Plus

- Independent angling of the boom section and the middle section to follow the terrain
- Angling (lifting and lowering) of both outside wings
- Due to six sensors, the boom actively follows the terrain
- The precise, lowest possible working height is maintained due to automatic boom control system
- Boom control system with a target height below 40 cm ensures minimum drift

Extension

BoomControl/BoomControl Pro

- Due to 2 additional sensors, the boom actively follows the terrain
- To increase the field of vision
- Ideal for ridge and row crops or for reduced working widths

PRECISIONSPRAY

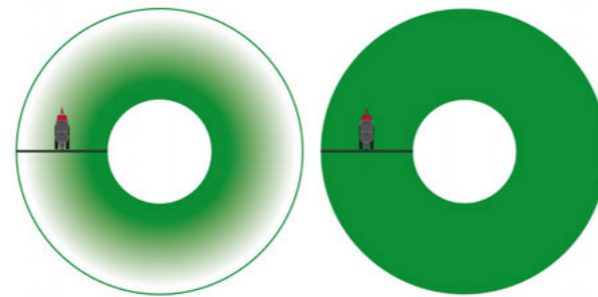
Pulse width modulation – state-of-the-art application technology



PrecisionSpray is a pulse nozzle system that triggers the nozzles with a frequency of 20 Hertz. The application rate can thus be adjusted infinitely via the duty cycle – with constant pressure and drop size with variable speed and while maintaining the spraying characteristics. This allows for using larger nozzles which are more resistant to cloggings and the number of necessary nozzle sizes is minimised. The nozzles are switched on and off for an optimum longitudinal

and transverse distribution. The system is completely integrated in ISOBUS and the HORSCH sprayer software: due to curve compensation and the use of application maps, overmetering and undermetering can be avoided actively. Active resistance management and even crop population with reduced mixture use make the sprayer the optimum tool Precision Farming.

- Infinitely variable adaption of the volume flow with constant pressure and drop size
- Constant drop spectrum when using one nozzle
- Lower number of different nozzle sizes required
- Adaption of the application rate without changing the spraying characteristics
- Curve compensation and VariableRate per section
- Large nozzle bodies that are less prone to cloggings



Avoid over and under applying due to curve compensation

Pneumatic nozzle and section control

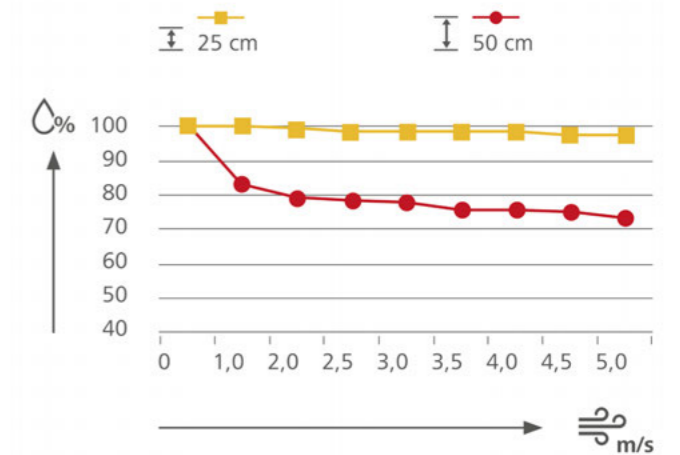
Performance due to diversity

Due to the pneumatic nozzle control and the pneumatic section control, it is possible to precisely switch off nozzles and sections with compressed air. Nozzle spacings of 25 cm and 50 cm are available.

Individual and intelligent application technologies allow for an optimum penetration and wetting of the population. Variable nozzle body combinations (pneumatically switchable) can also be used. All nozzles are controlled individually

and are pneumatically combined in sections. This also facilitates maintenance and the easy detection and repair of errors and blockings at the nozzles. As standard, all nozzle body configurations are equipped with nozzle holders for edge nozzles. Comprehensive tests in our wind tunnel show considerable advantages with regard to the drift behaviour depending on the target height.

- Individually controlled nozzles, combined pneumatically in sections
- 6 to 42 possible sections (standard sections or individual configuration options)
- Excellent penetration and wetting of the population
- Optimum target area spacing with a nozzle spacing of 25 cm
- Allows for individual and intelligent application technologies



Drift comparison: wetting (in %) depending on the wind force (m/s) at a target area spacing of 25 and 50 cm



Band spraying is also no problem for a 25 cm spacing



25 cm nozzle layout: more nozzles more possibilities e.g. 3D application



Pneumatic nozzle and section control e.g. 3D application

AutoSelect

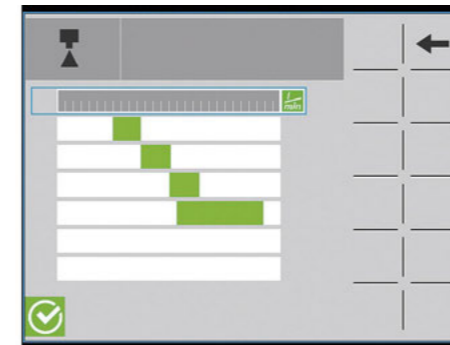
Various combination options with up to 16 different nozzle profiles can be saved – each profile can be switched on or off in the cabin. If the work is not interrupted, the optimum pressure range can be adjusted in the terminal and the corresponding nozzle size are controlled automatically continuously. Automatic adaption of the boom height depending on the chosen nozzle profiles and automatic switching between the nozzle levels. The nozzle spacings stored in the nozzle profiles serve as a basis. With more nozzles the farmer has more options to choose from.

Fully automatic AutoSelect control: controls the nozzle size or combination while at the same time adapting the application rate and the operational speed. High comfort and safety for an optimum management of the distance along waters and structures.

- Control of the nozzle size in combination with the application rate means the operational speed is adapted
- Possibility to adjust the target height in addition to the pressure range to keep up the distance required
- Optimum distance stipulation control along waters and structures
- Automatic adaption of the boom height depending on the defined nozzle profiles
- Can be switched on or off comfortably in the cabin



AutoSelect menu in the terminal

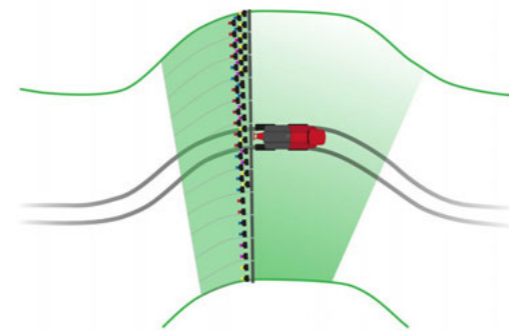


AutoSelect nozzle overlap

AutoSelect Pro

AutoSelect Pro takes the HORSCH nozzle control system to the next level. Due to the separate activation of the curve compensation, it is possible to combine profiles and thus increase the application rate on the outside of the curves in a targeted way when cornering. At the same time, the application rate is reduced by switching to a smaller nozzle size on the inside of the curve.

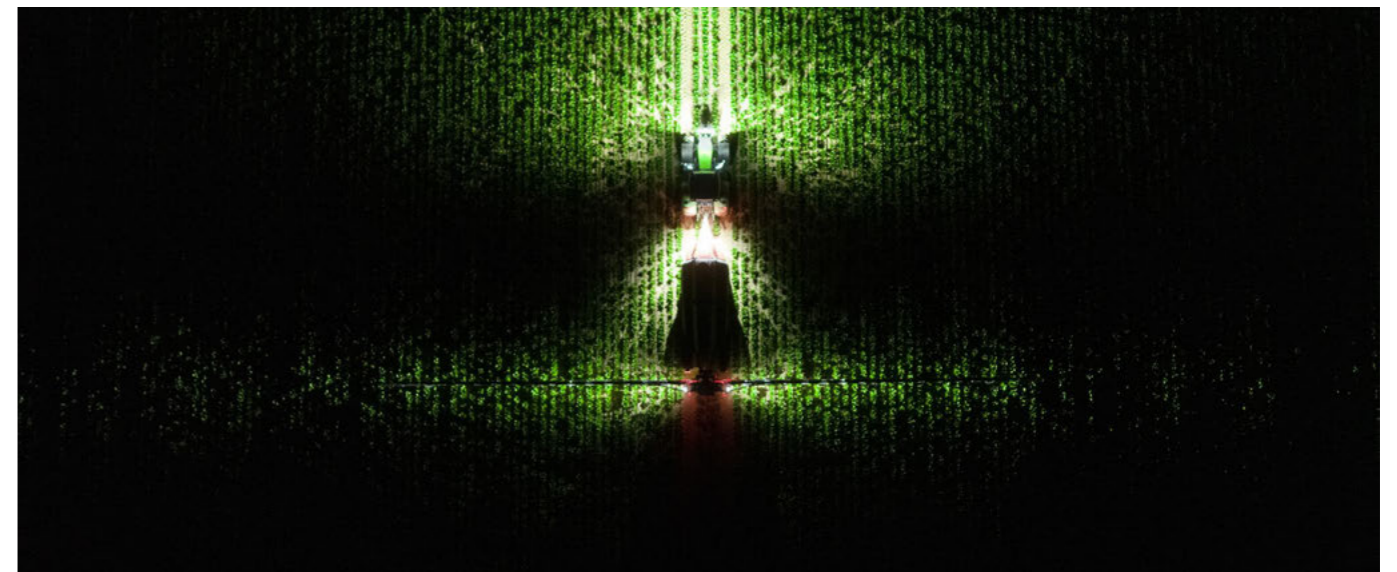
- All functions of AutoSelect
- Additional: activation for curve compensation for the pneumatic nozzle control
- Rate adjustment when cornering due to combination of the profiles
- Reduction of over and under applying.



AutoSelect Pro: curve compensation

NightLight

Optimal spraying control at night



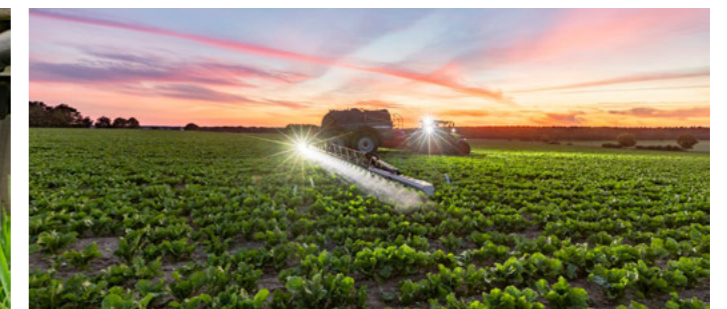
Innovative and powerful LED lights ensure an optimum illumination with their heavily focused light which penetrates all spraying cones. Thus, the lighting system guarantees more safety and efficiency while spraying around the clock. A strong LED spotlight is installed per boom side to ensure optimum spraying control at twilight and at night as well as an overview of the nozzle function – also in section mode. The automatic light function deactivates the headlights on the headlands to prevent that for example passers-by are blinded.

Optionally, NightLight can be combined with an automatic washing system that automatically cleans the lights and prevents dust from settling on the lights. Moreover, LED light strip at the induction centre as well as a LED apron lighting are available.

- Innovative LED technology ensures optimum illumination
- Highly focused light penetrates all spraying cones
- Optimum spraying control at twilight and at night
- 100 % control of the nozzle function – also for section control
- More safety and efficiency while spraying around the clock
- Optional: NightLight with cleaning
- Optional: light bars at the induction centre and boom apron lighting



NightLight incl. cleaning



NightLight nozzle cone lighting

INTELLIGENCE

eosT10 (Pro)

With the new terminal generation eosT10 you can experience machine control at top level. Due to the high resolution and the sophisticated user guide, even complex machine functions can be operated comfortably. The high efficiency and the large (working) memory allow for a smooth handling of large data quantities or application maps. The terminal, thus, is the perfect all-rounder for the operation of the machine

- High-resolution 10" terminal for controlling all ISOBUS devices according to ISO 11783
- Reliable and powerful: a high-performance hardware combined with an intuitive, user-friendly operation in daytime or night mode
- Straightforward transfer of application maps with the wireless Task Data Exchange
- Various layout options allow for a simultaneous display of several applications – for an optimum overview
- eosT10 and eosT10 Pro – one hardware, completed by two licence kits. Precision is always standard for us.



By displaying up to 3 widgets in addition to the main working screen, the user can keep track of several applications at the same time

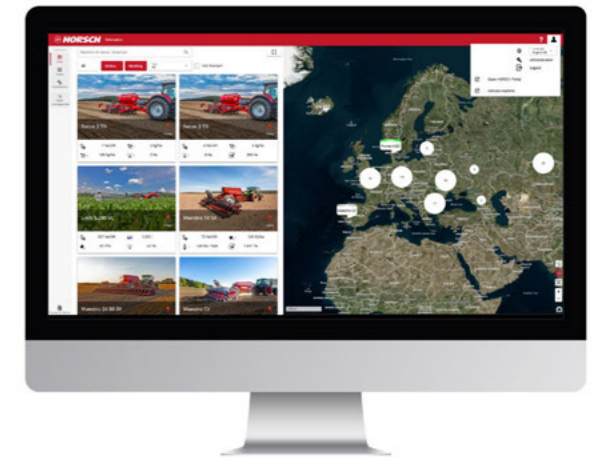


Due to the flexible holder, the eosT10 can be perfectly integrated in every cabin

HorschConnect

Prepare today for tomorrow. Control different machine functions quite easily via the MobileControl app – your smartphone replaces the terminal! In addition, gain complete, transparent insight in all aspects of work performance and working quality with HorschConnect Telematics.

- Digital solutions exactly where they make sense
- Straightforward out-of-the-box solution with integrated SIM card, WLAN modem and other interfaces
- HorschConnect Telematics: automated documentation of application rate, nozzle profile, nozzle status, pressure and target area spacing
- Control of machine functions via the smartphone app MobileControl
- Control of machine functions via smartphone app MobileControl: e.g. nozzle test for individual sections



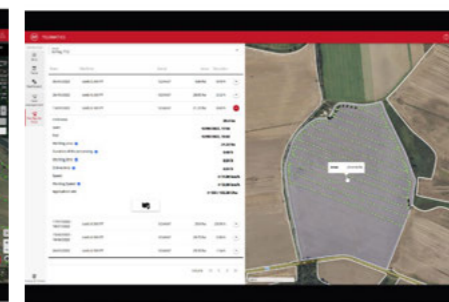
With HorschConnect telemetry solutions can be found in the sowing and plant protection sector – exactly where they make sense



The MobileControl app allows for controlling individual machine functions – completely comfortably from the smartphone



Success factor transparency: position-specific data of all relevant information like error messages, application rate, nozzle status or target area spacing



With the field boundaries import all data can be analysed over the season – even in a site-specific way



HorschConnect

Adapted Tyre Pressure Control

Fully software integrated, automatic regulation of the internal tyre pressure



ATP Control – smooth running with a tyre pressure of 2.3 bar

ATP Control – increased contact area at 1.0 bar tyre pressure

On time plant protection in optimum weather conditions sometimes takes place in unfavourable soil conditions. To achieve top performance with large tank capacities and working widths while at the same time protecting the top-soil and avoiding compaction, the automatic tyre pressure adjustment Adapted Tyre Pressure Control (ATP) provides a fully integrated automatic control of the internal tyre

pressure in the ISOBUS software of the sprayer. Depending on the level of the mixture tank, the optimum pressure of the tyre is always generated for road transport or in field mode to avoid having to compromise between stability and soil protection. The possibilities of state-of-the-art tyre technologies are used in an optimum way.

- Automatic regulation of the internal tyre pressure
- Completely integrated in the ISOBUS software of the sprayer
- No compromises between tank capacity, working width and soil protection
- Always optimum contact area of the tyre in the field and on the road

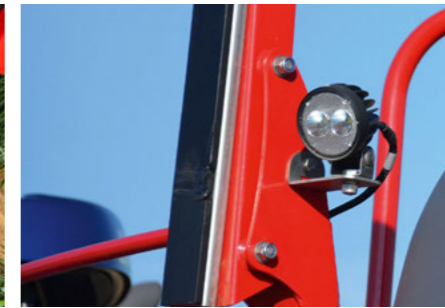


Efficient on the road and gentle in the field with ATP Control

ADDITIONAL EQUIPMENT



52 l stainless steel induction hopper incl. additional shock nozzle



Boom apron lighting



MotionControl to smooth the horizontal movements in the boom wings



Connect & Fold system – for commercial droplegs



Systems for under leaf spraying, e.g. droplegs



Container rack



Hose drum for outside cleaning



Hydraulically driven high-pressure cleaner

TECHNICAL DATA

Leeb TD	12 TD
Pump output (l/min)	1000
Empty weight (kg)	7800 - 10900
Vertical load empty (kg)	400 - 1100
Max. permissible vertical load (kg)	4000
Axle load empty (kg)	3700 - 4900
Max. permissible axle load (kg)	10000
Total length max. (transport position) (m)	9.70 - 12.00
Transport width (transport position) (m)	2.55 - 3.00
Transport height (m)	3.88 - 3.98
Track widths, mechanically adjustable (m)	2.00 / 2.25

Clearance (m)	0.90
Mixture tank nominal volume (l)	12000
Mixture tank actual capacity (l)	12800
Fresh water tank (l)	850
Hand wash tank (l)	15
Working widths (m)	24 - 48
Sections min./max. (Piece)	6 - 42
Working height (m)	0.3 - 2.5
Max. (Bar)	8
Operational speed (km/h)	4 - 20



Your distributor

HORSCH LEEB Application Systems GmbH

Kleegartenstraße 54
 94405 Landau an der Isar
 Phone: +49 9951 6041-0
 Fax: +49 9951 6041-3092
 E-Mail: info@horsch.com

horsch.com

Paper: 120g/qm Maxi Offset. The paper is certified according to the EU Ecolabel. This label is only granted for products and services whose environmental consequences are considerably lower than those of comparable products. For more details see www.eu-ecolabel.de. Printing ink: Printing ink QUICKFAST COFREE. Free from mineral oil and cobalt. Moreover, it is certified and recommended for printing according to the „Cradle-to-Cradle“ principle (quasi “from the origin back to the origin”) – an approach that deals with the spreading of continuous and consequent recycling management. For more details see www.c2c-ev.de.

All specifications and diagrams are approximate and not binding. Technical features and design are subject to change.