



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



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.



Smooth road holding with tandem axle unit and hydraulic suspension



Active steering of both axles is integrated in the machine software

CONDITIONS OF USE



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

- The 20 t tandem axle unit ensures maximum stability. Additionally, the active transport wheels ensure stable roadability at high operational and transport speeds. 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.



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 extra 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

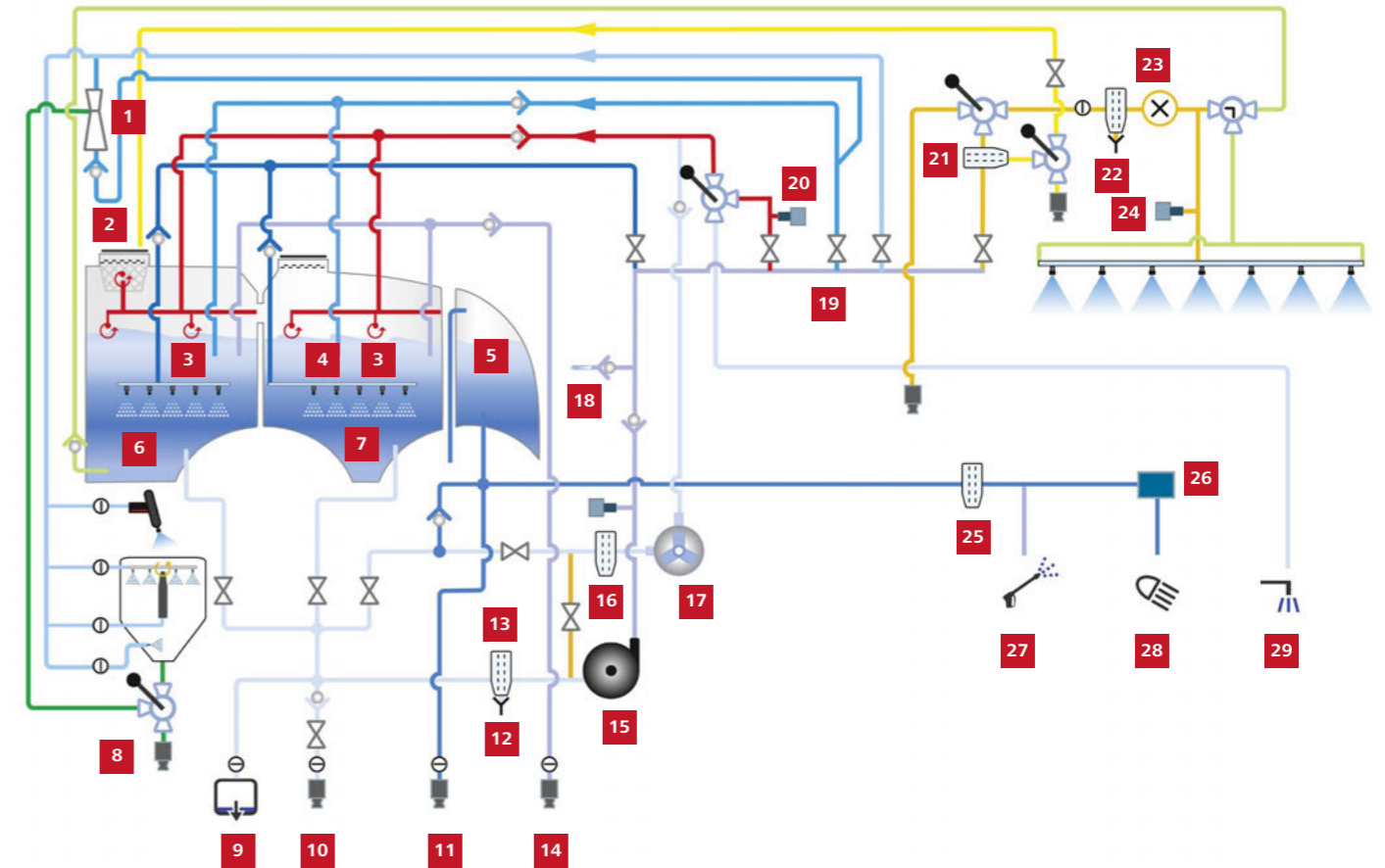
1. Complete cleaning: rinses injector line – via the filter to the boom – completely with fresh water and then continues with the continuous inside cleaning (CCS) for mixture tank and boom.
2. Dilution: dilute the spraying mixture in the desired ratio with just a few simple steps
3. Intensive washing 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 cycle – 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.

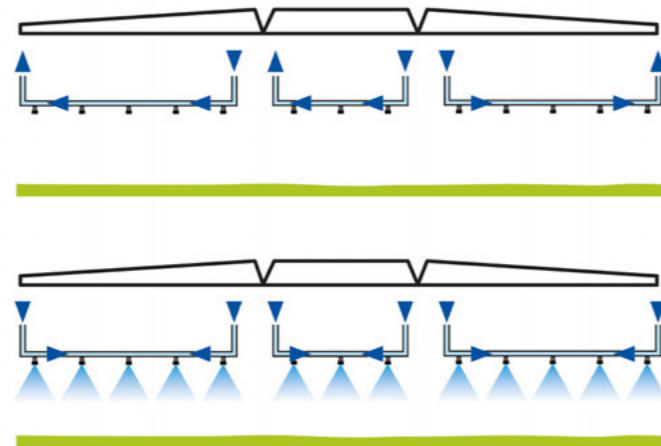
The swivelling induction hopper with a gas pressure absorber and a durable stainless steel labelling is equipped with an efficient injector lining. Upper and lower rinsing nozzles create a whirl-like circulation for quickly flushing-in liquids and are also suitable for granulate. Moreover, the induction 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).

DynamicSteering

The kingpin steering of both axles ensures a smooth boom position while at the same time maintaining high stability. It ensures the most precise following of the machine in the tractor tracks and thereby significantly reduces track damage. With two additional selectable steering modes in the terminal, the machine can be operated either with maximum track accuracy without scraping at the front axle or with maximum material protection during very tight turns on the headlands for minimal track damage. Due to the waisted frame design, very large steering angles (up to 28°) are possible despite the soil-protecting tyres with a diameter

of 2.19 m, making the combination extremely manoeuvrable and track-stable even in uneven terrain. While the steering is blocked in road mode or centered in the field at speeds above 16 km/h, it can be overridden manually in the cabin with a joystick while manoeuvring or working in the field. When driving straight on, the steering automatically re-centers. The design with a gyroscope on the axle which works without a sensor—and thus without calibration—is unique and a benchmark among trailed systems.

- Kingpin steering of both axles for precise following in the tractor tracks prevents track damage in the crop
- Maximum manoeuvrability and stability in uneven terrain
- Two additional selectable steering modes ensure maximum tracking precision without scraping or provide highest material protection in tight turns
- Can be overridden via joystick in the cabin when manoeuvring
- Gyroscope directly on the axle: no calibration required
- Integrated in machine software



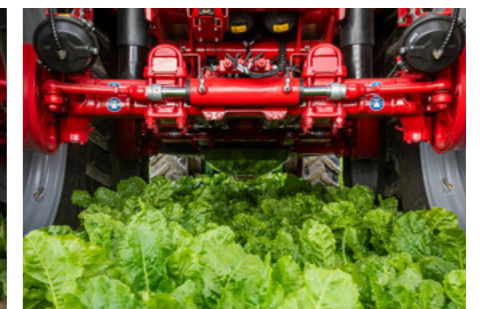
DynamicSteering – intelligent kingpin steering



Maximum crop protection and exact following in the tracks



Extremely manoeuvrable and stable with a clearance of up to 90 cm



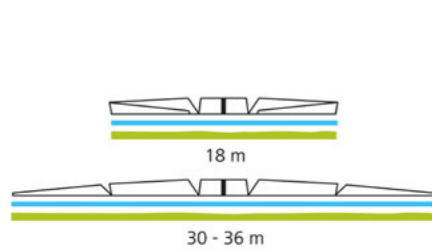
Large clearance with tyres up to Ø 2.19 m

Boom options

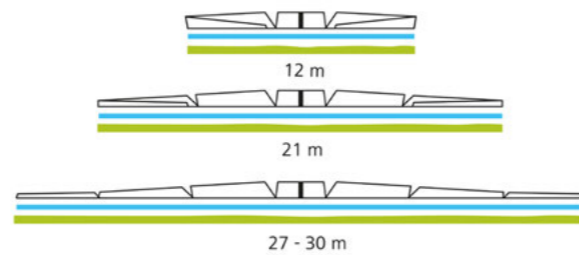
Precise technology – sophisticated to the last detail

For the boom, we rely on the well-proven system consisting of a parallelogram suspension and the well-established boom control system BoomControl in working widths from 24 to 48 m which ensures an extremely stable boom position even in very uneven terrain and at high operational speeds. The patented suspension with active control of the middle section prevents dipping while cornering and on the

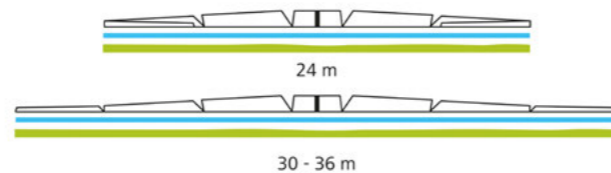
headlands. The wings of the folding boom are equipped with an overload protection to guarantee safe operation at any time. The weight-optimised design made of durable aluminium profiles protects nozzles, nozzle bodies and spray lines against damage. Different folding options allow for individual solutions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



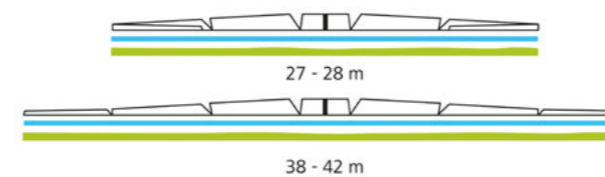
BoomControl – 5-part with reduced working width 16 m



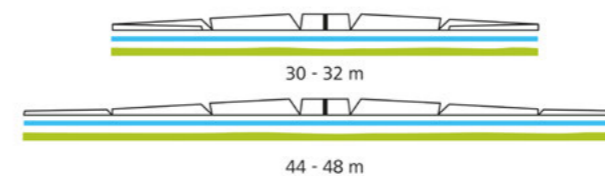
BoomControl – 7-part with reduced working width 12 m and 21 m



BoomControl – 7-part with reduced working width 24 m

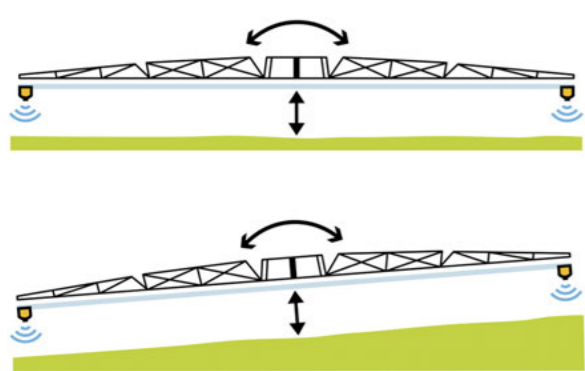


BoomControl – 7-part with reduced working width 27 – 28 m

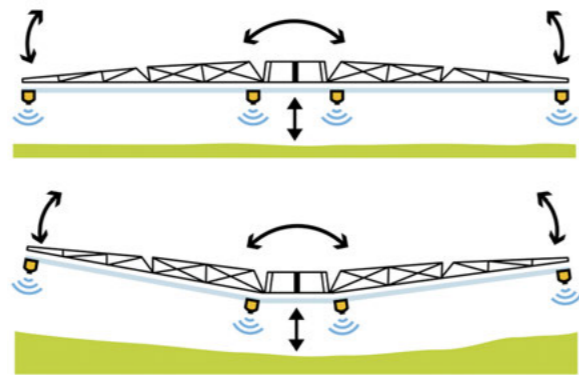


BoomControl – 7-part with reduced working width 30 m

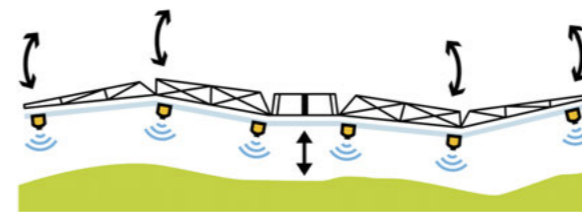
- Parallelogram suspension with BoomControl for stable boom position in all conditions
- Boom basic versions in working widths from 24 to 48 m
- Stable aluminum profile as wind and nozzle protection
- Overload protection and damping of the wings: collision protection
- Overload protection of the outside wings towards the rear, damping of the inside wings towards the front and rear



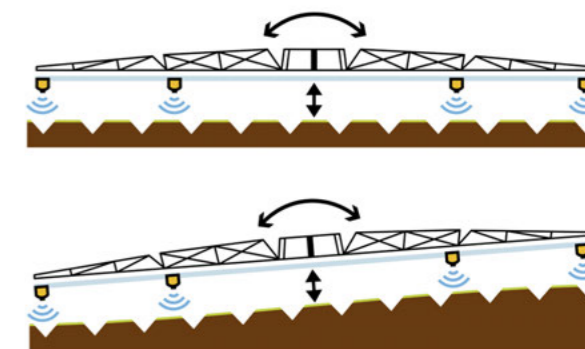
BoomControl – active adaption of the boom to the terrain due to two sensors



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

- Maintenance of the exact, lowest possible working height due to active boom control system
- Boom control system with a target area spacing of less than 40 cm ensures minimal drift
- Active adaption of the boom to the terrain by means of two sensors

BoomControl Pro

Active boom control system
BoomControl Pro

- Independent angling of the boom arms and rotation of the middle section to adapt to the terrain
- Active adjustment of the boom to the terrain with 4 sensors
- Maintenance of the exact, lowest possible working height due to automatic boom control system
- Boom control system with a target area spacing of less than 40 cm ensures minimal drift
- Boom is completely decoupled from the vehicle

BoomControl Pro Plus

Active boom control system
BoomControl Pro Plus

- Independent angling of the boom arms and rotation of the middle section to adapt to the terrain
- Angling (lifting and lowering) of the two outside wings
- Active adjustment of the boom to the terrain by via sensors
- Maintenance of the exact, lowest possible working height due to automatic boom control system
- Boom control system with a target area spacing of less than 40 cm ensures minimal drift

Extension

BoomControl/BoomControl Pro

- Active adaption of the boom to the terrain by means of two additional sensors
- To extend the field of vision
- Ideal for ridge and row crops or for reduced working widths

PrecisionSpray

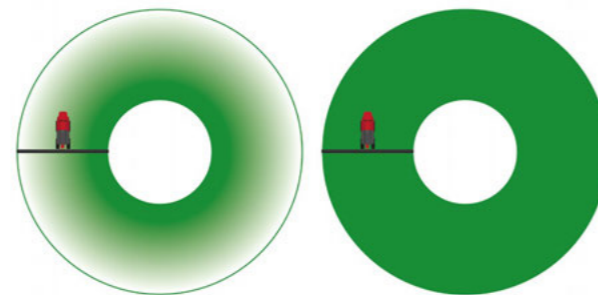
Pulse width modulation – state-of-the-art application technology



PrecisionSpray is a pulse nozzle system that triggers the nozzles in a pulsating way at a frequency of 20 Hertz. This allows for adjusting the application steplessly via the Duty Cycle – with constant pressure and drop size at variable speed and while maintaining the spraying characteristics. This allows for using larger nozzles which are less susceptible to clogging, and the number of necessary nozzle sizes are minimised. For optimal longitudinal and transverse distri-

bution, the nozzles are switched alternately. The system is fully integrated into ISOBUS and the HORSCH sprayer software: with curve compensation and the use of application maps, over- and underdosage can be avoided actively. Active resistance management and even populations with minimal mixture consumption make the nozzle a tool for Precision Farming.

- Infinitely variable adjustment of the flow rate at constant pressure and droplet size
- Constant drop spectrum when using a nozzle
- Fewer different nozzle sizes required
- Adjustment of the application rate without altering spraying characteristics
- Curve compensation and VariableRate per section
- Generally larger nozzle bodies that are less prone to clogging



Avoid over and under applying due to curve compensation

Pneumatic nozzle and section control

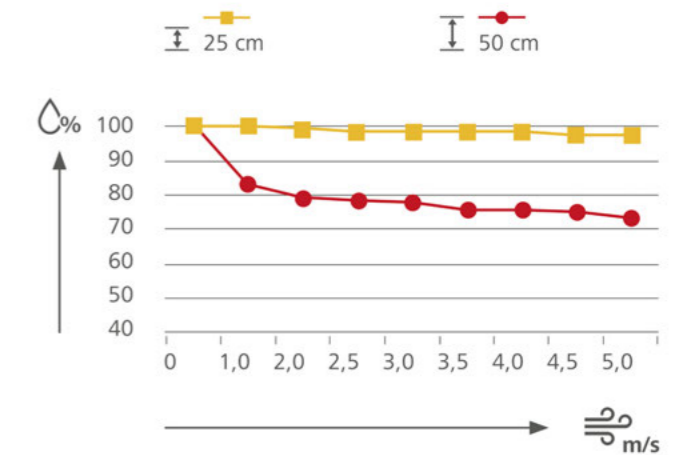
Performance due to diversity

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.

This allows for individual and intelligent application technologies to achieve optimal penetration and wetting of the crop. 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 options, e.g., 3D application



Pneumatic nozzle control 2-2 with 3D application

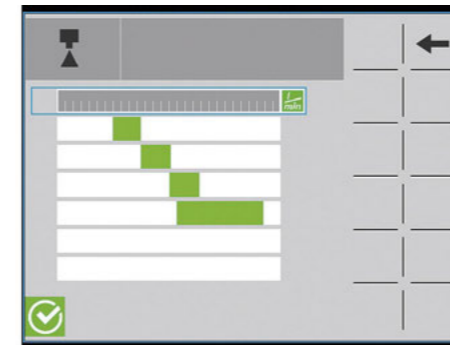
AutoSelect

Various combination options with up to 16 storable, different nozzle profiles – to be switched on or off from the cabin. Without interruption, the optimal pressure range that can be configured via the terminal and the corresponding nozzle size are adjusted automatically. Automatic adjustment of the boom height based on the defined nozzle profiles and automatic switching between the nozzle levels. This is based on the nozzle spacings that are stored in the nozzle profiles. Thus, with more nozzles, the farmer has more options.

Fully automatic AutoSelect control system: control of nozzle size or combination while simultaneously adjusting the application rate and the operational speed. High comfort and safety for optimal management of the spacing requirements along waters and terrestrial structures.



AutoSelect menu in the terminal

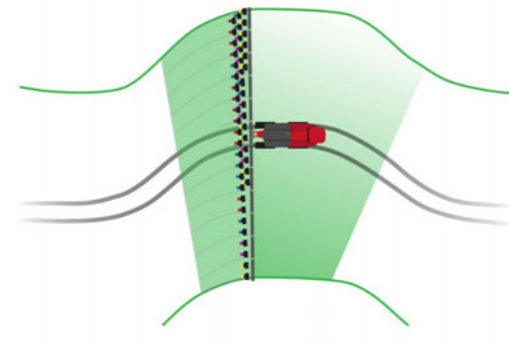


AutoSelect nozzle overlap

- Control of nozzle size and combination while simultaneously adjusting the application rate and the operational speed
- Possibility to adjust not only the pressure range but also the target area spacing to comply with spacing requirements
- Optimal management of spacing requirements along waters and terrestrial structures
- Automatic adjustment of boom height based on the defined nozzle profile
- Can be switched on and off comfortably from the cabin

AutoSelect Pro

AutoSelect Pro takes HORSCH's own nozzle control to the next level. The separate activation of curve compensation allows for combining profiles, thus specifically increasing the application rates on the outer sides of the curves when cornering. At the same time, the application rate is reduced by switching to a smaller nozzle size on the inside of the curve.



AutoSelect Pro: curve compensation

- All functions of AutoSelect
- Additionally: activation for curve compensation for pneumatic nozzle control
- Adjustment of quantity while cornering by combining profile
- Reduction of over- and underdosage, decrease of resistances

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, available with white or blue light, to ensure optimum spraying control at twilight and at night as well as an overview of the nozzle function – also with section control. The automatic light function switches off the headlights on the headlands to avoid blinding, for example, passers-by.

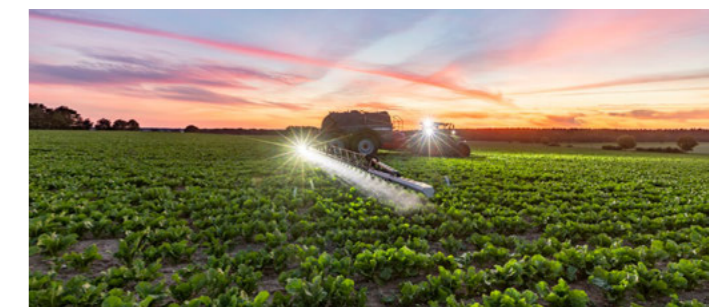
Optionally, NightLight can be combined with an automatic washing system that automatically cleans the lights and prevents dust from settling on the lights. From 30 m boom width or BoomControl Pro Plus, 4 headlights with white or blue light are available for optimal illumination for larger working widths or in challenging terrain at night.

Moreover, LED light strip at the induction centre as well as a LED apron lighting are available.

- Innovative LED technology ensures optimum illumination
- Strongly focused light penetrates all spraying cones.
- Optimal spraying control also at dusk and at night
- 100% control of the nozzle function – even with section control
- More safety and efficiency for spraying operations around the clock
- Optional: NightLight with cleaning
- Optional: Choice between white or blue NightLight headlights
- Optional: From 30 m boom width or BoomControl Pro Plus, 4 headlights with white or blue light for optimal illumination for larger working widths or challenging terrain at night
- Optional: light bars at the induction centre and boom apron lighting



NightLight incl. cleaning



NightLight nozzle cone illumination

INTELLIGENCE

eosT10 / eosT10 Pro

Due to the high resolution and the well-thought-out user navigation, 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. In addition to the traditional import resp. export of data via a USB flash drive, the transfer can also take place easily and conveniently online directly between the PC and the terminal.

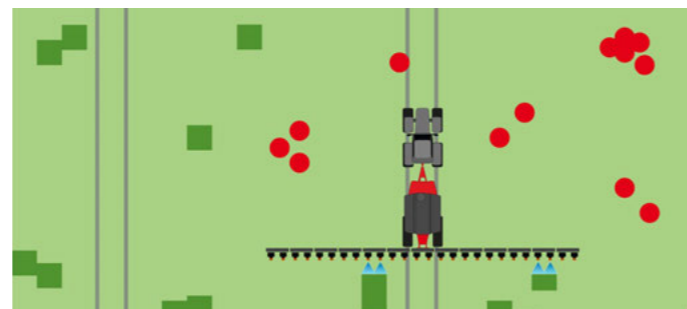


By displaying up to 3 widgets in addition to the main working screen, the user can keep track of several applications at the same time

- High-resolution 10" terminal for controlling all ISOBUS devices according to ISO 11783
- Reliable and powerful: high-performance hardware combined with intuitive, user-friendly operation in day or night mode
- Various layout options allow for a simultaneous display of several applications – for an optimum overview
- Straightforward transfer of application maps with the wireless Task Data Exchange
- Targeted use of herbicides by using SpotSpraying (prerequisites: SpotSpraying map & crop care sprayer with SectionControl)
- A real-time transmission of the terminal display via Remote Support facilitates the technical support.



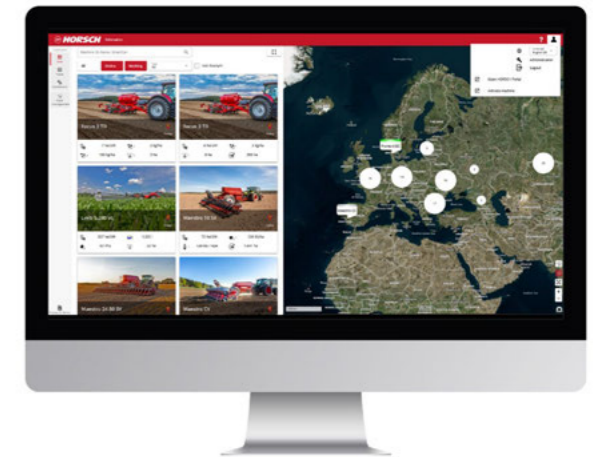
With SpotSpraying, plant protection agents are applied precisely, efficiently, and in an environmentally friendly way.



Site-specific application with SpotSpraying or PatchSpraying reduces the use of crop care agents and protects the crops.

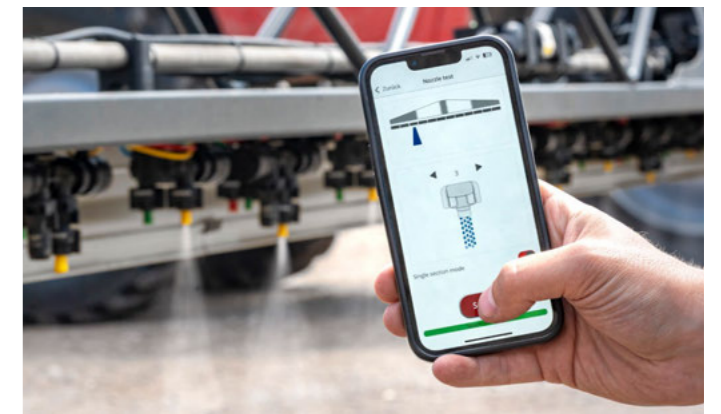
HorschConnect

Prepare today for tomorrow. Easily control various machine functions via the HORSCH Control app – your smartphone complements the terminal! Gain comprehensive, transparent insight into work rate and work quality with HorschConnect Telematics.



With HorschConnect, telemetry solutions are making their way into the sectors seeding and crop care – exactly where they make sense

- Digital solutions exactly where they make sense
- Straightforward out-of-the-box solution with already integrated SIM card, Wi-Fi modem and other interfaces
- HorschConnect Telematics to document the performance of the machine
- HorschConnect Telematics for complete transparency of the working quality, e.g. the application rate of all components
- Targeted and proactive service by remote access to error messages
- Control of machine functions via the smartphone app HORSCH Control: e.g. carrying out nozzle tests for individual sections



The HORSCH Control app allows for controlling individual machine functions – comfortably with a smartphone



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



Digital networking with HorschConnect, GPS, and a weather station for optimal adaptation to current environmental conditions



Comfortably access current and past weather conditions on your PC with the weather station and HorschConnect Telematics

Camera steering and preparation

- High-precision control of the crop care sprayer on the row for band application
- Camera steering with a camera for precisely steering the sprayer in row crops
- In challenging conditions, the plant rows can be recorded in 2D or 3D mode.
- Preparation of HORSCH Leeb crop care sprayers ex factory, optionally with CultiCam
- In combination with HORSCH Transformer, to continue using the existing camera
- Including light kit for working at dusk or at night



High-precision steering of the trailed sprayer with CultiCam



Camera steering CultiCam with light kit for working in difficult lighting conditions



Efficient band application of the nozzle directly above the plant row with optional camera steering

Adapted Tire Pressure Control

On-time application in optimal weather conditions sometimes takes place in unfavorable soil conditions. To achieve maximum performance with large tank capacities and working widths while protecting the soil and avoiding compaction, the automatic tyre pressure adjustment Adapted Tyre Pressure Control (ATP) offers a fully ISOBUS software-integrated automatic regulation of the internal tyre pressure. This ensures that, depending on the filling level of the tank, the optimal contact area of the tyre is always achieved during road transport or in field mode so that no compromise between stability and soil protection has to be made. The possibilities of modern tyre technologies are optimally utilised.

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



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

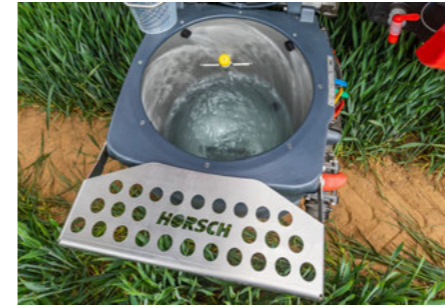


ATP Control – increased contact area at 1.0 bar tyre pressure

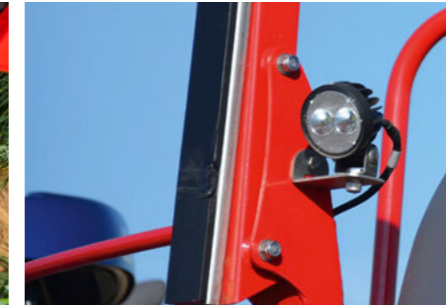


Efficient on the road and gentle in the field with ATP Control

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 – suitable for standard droplegs



Systems for underleaf spraying, e.g. droplegs



Smooth, stainless steel-cased underbody



Container deposit



Hose reel for outside cleaning

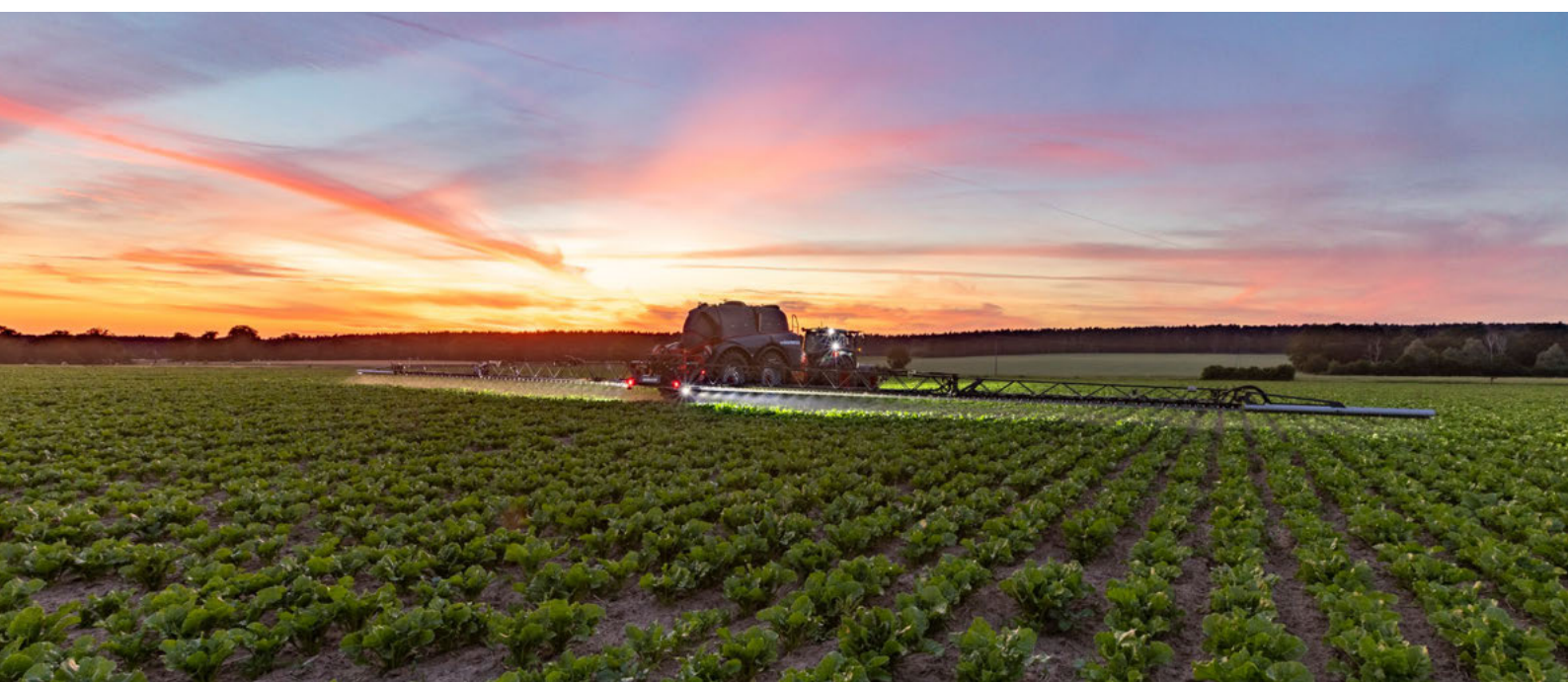


Hydraulically operated high-pressure cleaner

TECHNICAL DATA

Leeb TD	12 TD
Pump output (l/min)	1 000
Empty weight (kg)	7800 - 10900
Vertical load empty (kg)	400 - 1100
Max. admissible vertical load (kg)	4000
Axle load empty (kg)	3700 - 4900
Max. admissible axle load (kg)	10000
Total length max. (transport position) (m)	9,70 - 12,00
Transport width (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 (Piece)	6 - 42
Working height (m)	0,3 - 2,5
Max. working pressure (Bar)	8
Operational speed (km/h)	4 - 20



Your distributor



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

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