# Leeb CS

# H HORSCH



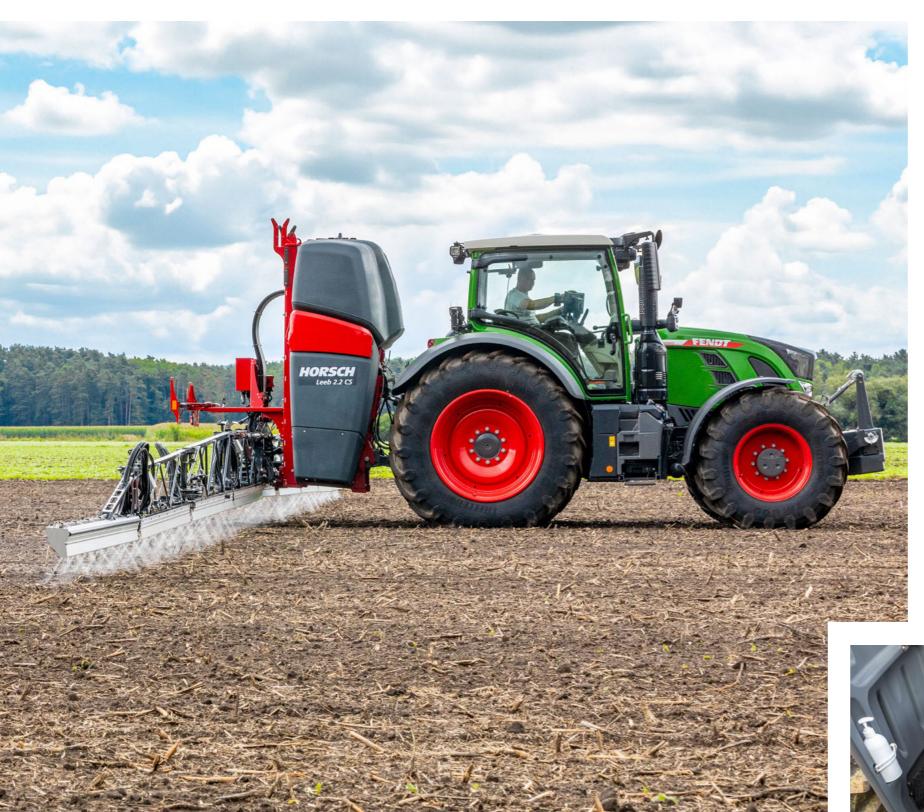
COMPACT AND AGILE



# Leeb CS

Compact 3-point sprayer with continuous inside cleaning system and active boom control system BoomControl

- Intelligent spraying technology with 3-point linkage
- CCS or CCS Pro water system with powerful rotary pump, continuous inside cleaning system and other automatic washing programs
- Little drift due to active boom control system and constant target area spacing even at high operational speeds
- Compact dimensions and optimised centre of gravity



The HORSCH Leeb CS has especially been developed for farms that set highest requirements on their crop care sprayer, but due to structures rely on a 3-point sprayer. Especially in small structures or in the sector of legume and special crop cultivation, the Leeb CS shows its strength. With a tank capacity of 1 400 l, 1 800 l and 2 200 l and a working width of 15 m to 30 m, it can be adapted individually to the requirements of the farm. Due to a multitude of folding options and the option for one-side folding, it can be used in very angled fields or to meet special requirements, e.g. application of liquid manure. This flexibility in combination with the components from the trailed and the self-propelled sprayer range results in a functional and efficient 3-point sprayer that convinces due to its compact design and agility.

Depending on the customer requirements, different equipment options are available: a mechanical operation of the water circuit, our so-called CCS where the farmer proceeds as usual with suction and pressure side or an option with completely electric valves called CCS Pro that is operated via an external terminal – both options are, of course, equipped with a continuous inside cleaning system for optimum cleaning results. An induction hopper is also available in two versions: the polyethylene version with 35 l or, as an option, the stainless steel version with a capacity of 52 l. Another equipment detail is our well-known active boom control system BoomControl where the boom is actively adapted to the surface by means of two hydraulic cylinders and, thus, a distance to the target of up to 30 cm can be achieved. The prerequisite is the 25 cm nozzle spacing to achieve a perfect distribution of the mixture. The low distance to the target can effectively reduce drift and the placement of the crop care agents can be optimised.

We have, of course, also thought about the comfort of the user. To this end, a comfortable linkage concept has been developed where a coupling frame is hooked to the rear hydraulics of the tractor and where all connections can be coupled comfortably with a distance of approx.1.5 m. The farmer then only has to drive backwards and pick up the sprayer like a kind of backpack.





35 I induction hopper

Compact transport dimensions

# **CONDITIONS OF USE**



- Intuitive induction centre with the well-known induction hoppers from the trailed or self-propelled sprayer range
- Wide selection of folding options and possibility of one-side folding
- Tank capacity of 1 400, 1 800 and 2 200 l

- Optional: with a front hopper that is integrated in to the software
- Active BoomControl system for low target area spacings and, as an option, with 25 cm nozzle spacing



#### Theodor Leeb

When we developed the Leeb CS it was important for us to combine the well-known efficiency and the unique features of our trailed sprayers with compact dimensions for a 3-point linkage. The handling and the set-up times should be kept short and easy.

#### CCS

#### Continuous Cleaning System



ContinuousCleaningSystem

The CCS water system guarantees a continuous inside cleaning of tank, lines and boom. The additional CCS piston diaphragm pump for cleaning pumps clean water into the spray lines, the spraying pump removes the residual mixture from nozzles and the spray lines instead of diluting it. This allows the system to be cleaned quickly, thoroughly and with an optimised water consumption – without having to get off the machine directly from the cabin – and the sprayer is completely cleaned when leaving the field. To fill the machine, a powerful rotary pump with Load Sensing is used with manual operation for the suction and pressure side.

- Safe and quick cleaning by displacing the mixture from the lines
- Quick cleaning process of the sprayer without having to get off
- Complete control of the cleaning process in the cabin
- Electronic level indicator at the mixture tank with automatic switch-off
- Quick and thorough cleaning with optimised water use

#### **CCS Pro**

#### ContinuousCleaningSystem Pro



ContinuousCleaningSystem Pro (CCS 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

- 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 switchoff.

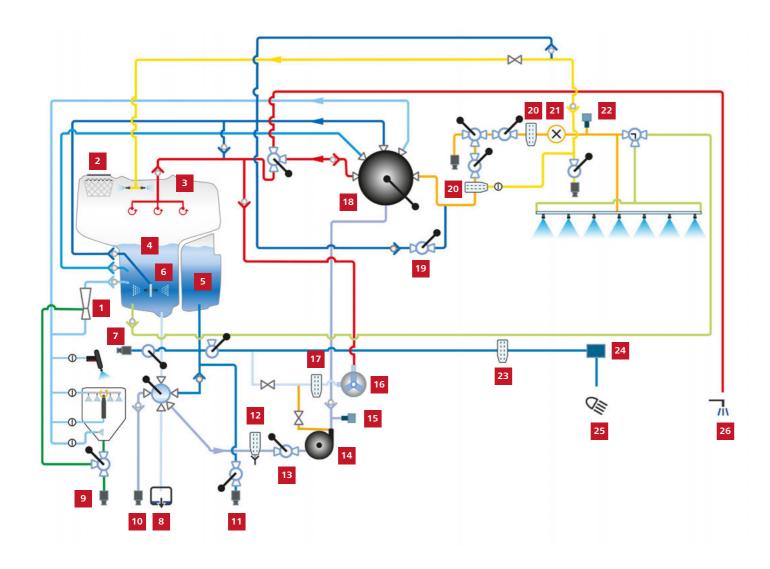
- Continuous inside cleaning with several cleaning and rinsing programs, can be operated comfortable in the cabin
- Pressure sensors for pump, agitator, inside cleaning and boom, suction and pressure side electrically controlled
- Operation with a large external terminal with all important induction 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

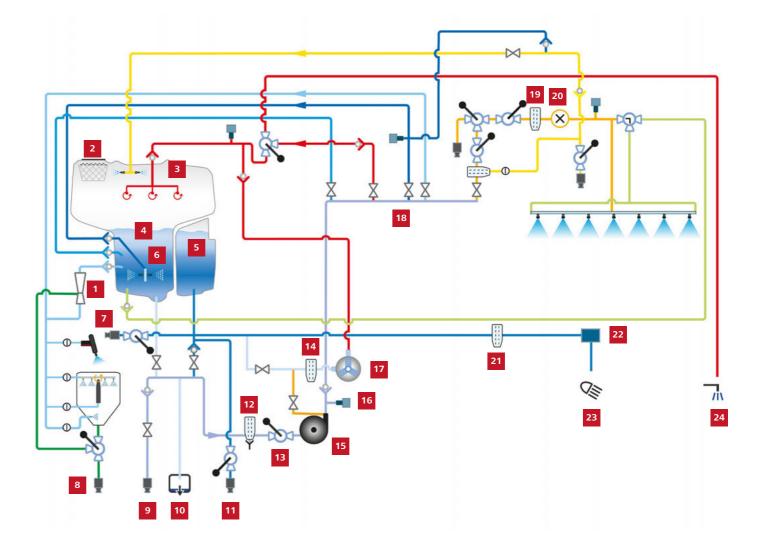


External control terminal CCS Pro

#### Water system – CCS – Leeb CS

#### Water system – CCS Pro – Leeb CS





- 1 Injector
- 2 Dome sieve
- 3 Inside cleaning
- 4 Spraying mixture tank
- 5 Fresh water tank
- 6 Agitator
- 7 Residual discharge fresh water
- 8 Residual discharge
- 9 Filling sluice

Suction filling
Filling fresh water
Suction filter
Stop valve
Rotary pump
Pressure sensor
Piston diaphragm pump
Fresh water filter

Bypass agitator

19 Control valve
20 Pressure filter
21 Flow meter
22 Pressure sensor
23 Filter
24 Electric pump
25 NightLight cleaning
26 Outside cleaning

- Injector
   Dome sieve
   Inside cleaning
   Spraying mixture tank
   Fresh water tank
   Agitator
   Residual discharge fresh water
   Filling sluice
   Suction filling
- 10 Residual discharge
  11 Filling fresh water
  12 Suction filter
  13 Stop valve
  14 Fresh water filter
  15 Rotary pump
  16 Pressure sensor
  17 Piston diaphragm pump
  18 Electric switch unit
- 19 Pressure filter
  20 Flow meter
  21 Filter
  22 Electric pump
  23 NightLight cleaning
  24 Outside cleaning

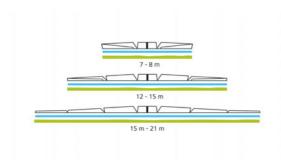
# Boom options

# Precise technology – sophisticated to the last detail

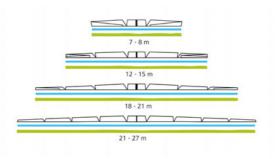
With regard to the boom, we rely on the well-proven system consisting of parallelogram suspension and the well-proven boom control system BoomControl that guarantees an extremely smooth boom position even in very uneven terrain and with high operational speeds. The patented suspension with active control of the middle section prevents immersion during cornering and on the headlands. The weight-optimised design made of durable aluminium profiles protects nozzles, nozzle bodies and spray lines against damage. Different folding and boom options in working widths from 15 to 30 m allow for individual solutions for every farm structure.

- BoomControl for smooth boom position in all conditions
- Working widths from 15 to 30 m
- Stable aluminium profile for safe protection of the nozzles, nozzle bodies and spray lines against damage
- Overload protection and damping of the wings: collision protection
- MotionControl as standard, damping of the inside wings towards the front and the rear

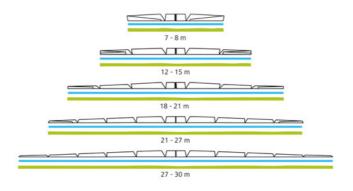




BoomControl CS – 9-part with reduced working width 7 - 8 m  $\,$ 



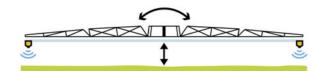
BoomControl CS – 9-part with reduced working width 7 - 8 m

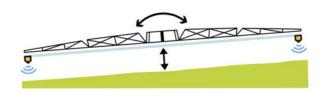


BoomControl CS – 11part with reduced working width 7 - 8 m  $\,$ 

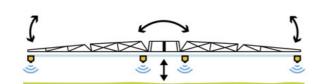
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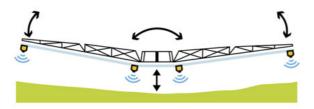




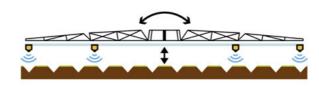


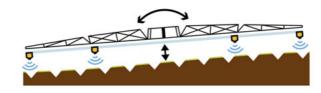
BoomControl – active adaption of the boom to the terrain due to two sensors





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





 ${\bf BoomControl/BoomContro\ Pro\ extension-extension\ of\ the\ field\ of\ vision\ is\ ideal\ for\ ridge\ and\ row\ crops}$ 

#### 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

#### 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

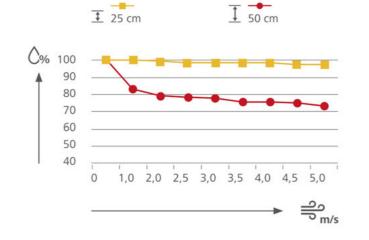
# Pneumatic nozzle and section control

#### 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



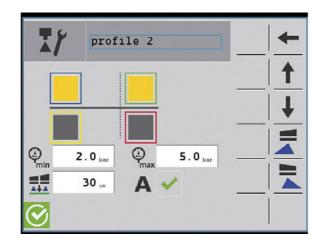
Pneumatic nozzle and section control

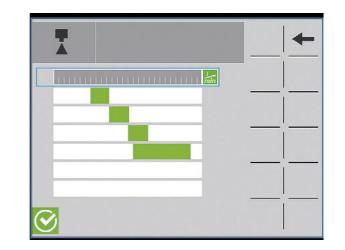
#### AutoSelect

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

# Distribution system and induction hopper

#### No hose is the best hose

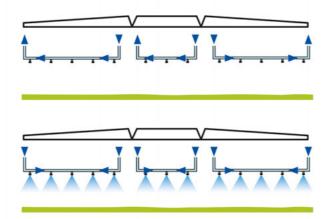
The sophisticated distribution system ensures an optimum supply of boom, intensive agitator, inside tank cleaning and induction hopper. Only one hose and one return flow hose are required for the circulation of the spraying mixture across the entire boom width, thus minimising deposits and facilitating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

The swivelling induction hopper with a gas presssure 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 I and the 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).

# NightLight

#### Optimal spraying control at night



NightLight nozzle cone lighting

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

### **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

# ₩ HORSCH

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

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

- 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



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

# ADDITIONAL EQUIPMENT

# TECHNICAL DATA







52 l stainless steel induction hopper incl. additional shock nozzle

Hose drum for outside cleaning

Second pressure filter in the middle frame of the boom







The robust shunting roller waggon facilitates the handling of the machine

Leeb CS	1.4 CS	1.8 CS	2.2 CS
Empty weight (kg)	1480 - 2030	1500 - 2050	1520 - 2070
Total length max. (m)	2.60	2.60	2.60
Transport width (m)	2.48	2.48	2.48
Transport height (m)	3.60 - 3.95	3.60 - 3.95	3.60 - 3.95
Mixture tank nominal volume (I)	1400	1800	2200
Mixture tank actual capacity (I)	1650	1950	2350
Fresh water tank (I)	400	400	400
Hand wash tank (I)	15	15	15
Working widths (m)	15 - 30	15 - 30	15 - 30
Sections min./max. (Piece)	6 - 42	6 - 42	6 - 42
Working height (m)	0.3 - 2.0	0.3 - 2.0	0.3 - 2.0
Pump output (I/min)	400	400	400
Max. (Bar)	8	8	8
Operational speed (km/h)	4 - 20	4 - 20	4 - 20



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Your distributor

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