Leeb GS

INTELLIGENT SPRAYING TECHNOLOGY
The Leeb GS:
ENGINEERING FOR PROFESSIONALS

Higher output with less machines in the shortest possible time. With this strategy professional farmers are today able to run their business successfully while remaining competitive. This inevitably paves the path to more and more powerful, more flexible machines and confronts engineers with completely new challenges. How can one make full use of the maximum performance potential with minimal use of machines?

The trailed plant protection sprayers Leeb GS are the optimum solution!

**The basis**
- Strong and stable frame
- Strong air suspension axles with level compensation
- Solid drawbar connection for large clearance

**Steering axle – less tramline damage**
- Steering axle for stable positioning of the boom with high stability and exact tracking to avoid tramline damage
- Optimal, even in uneven terrain
- High manoeuvrability

**Extremely low centre of gravity**
- Due to the special frame design the tank reaches down below the frame height – high stability at high operational speeds and on slopes
- Minimum residual quantities of chemicals

**Large tyres – less ground pressure**
- Wheels with diameter of up to 2.05 m
- Maximum ground contact area with perfectly adapted air pressure

**Taking care of the crop**
- Smooth machine underbody
- No edges and corners on the underside of the machine
- Hydraulically foldable and fully covered support leg

**Intensive agitator**
- Hydraulic agitator
- Infinitely adjustable via the terminal
- If the tank contents drop below 200 litre the agitator switches off completely and automatically. Thus, there are even less residual quantities.

**Stainless steel tank**
- Uncompromising – high-quality long-lasting stainless steel tank
- Easy cleaning and residue-free inside walls
- No spraying mixture residues on the absolutely smooth inside wall
- Welded from inside and outside
- Three baffle walls keep the machine steady, even in hilly terrain and during fast road travel
- Round tank for low sloshing forces
- 530 litre fresh water tank: enough water for one complete inside cleaning. This quantity is enough due to the low quantity of residues in the system.
Continuous inside cleaning

Continuous Cleaning System CCS
— Quick sprayer cleaning process without having to get off the machine
— Complete control of the cleaning process from the cabin
— Function: Displacement instead of dilution
— An additional cleaning pump feeds clear water into the pipeline system. The spraying pump sucks this water in and uses it to force the spraying mixture residue through the nozzles out of the pipeline system.
— Quick, thorough and water consumption optimized cleaning

Stainless steel indication hopper
— Adjustable Induction hopper
— Stainless steel symbol bar with coloured control levers
— 6 upper and 2 lower cleaning nozzles guarantee a vortex circulation to quickly jet in salts and floury agents
— Rotating conical cleaning nozzle
— Optional Ecofill connection sucking in jumbo drums

Circulation system + nozzle cleaning
— Circulation of the chemical solution through the complete nozzle tube as soon as the spraying pump is switched on.
— Spraying fluid therefore is always at the nozzle, even with the spraying apparatus switched off.
— When switching on a section or the entire spraying line for the first time, the chemical solution is directly and in a well-mixed way available in the partial system or in the entire spraying system.
— Prevents deposits and blockages
— Enables simple cleaning: The suction side of the pump is set to fresh water – the nozzle line is thus flushed with clear water – then keep spraying for about 3 seconds to clean all nozzles.
— Quick – simple and reliable: All this is done from the driver’s seat!

Ingenious distribution system
— The distributor for the pressure side is mounted at the front below the platform
— Optional supply of boom, induction hopper, intensive agitator and inside hopper cleaning
— Only one hose for the entire boom width and one return flow hose for wash circulation in the boom
— No deposits and easy cleaning

Circulation system
Sprayers
PS = Pressure Supply

Circulation
PS = Pressure Supply, RT = Return flow tank

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The pressure gauge unit indicates contamination of the pressure filter in due time, as well as the intensity of the inside cleaning and of the agitator.
**SIMPLE TO OPERATE.**

**Only the best: Centrifugal pump**
- Almost maintenance-free and long-lasting
- No additional hoses and pressure relief valve, items that are very hard to clean on diaphragm pumps
- High performance – short filling time: 1,000 l/min
- Automatic filling system stops exactly when reaching the number of litres that has previously been entered into the computer – also when entering two quantities, e.g. AHL followed by water
- New pressure regulation via pump speed
- Quicker and energy saving
- The pump only delivers the amount of fluid required for spraying, plus the pre-determined amount for the agitator
- No return line for excessive quantities necessary

**Control centre CommandBox**
- Convenient CommandBox for all necessary functions
- Very simple symbols identify suction side (right), four pressure outlets (middle) and filling (left) – see schematic
- Operator friendly above the induction hopper
- Even higher comfort: All essential functions like “Fresh water change-over” or “Inside cleaning” can also be controlled via the tractor terminal
- TankControl measures the filling level and switches off automatically when the pre-selected content is reached
Leeb GS details

- Tank sizes: 6,000, 7,000 and 8,000 litre
- Low horsepower requirement: optimally balanced weight distribution uses the tractor support load via the lower link hitching
- Very low centre of gravity: newly developed double tube frame carries the tank and is enclosed like a saddle
- The optimized routing of hoses reduces the hose lengths to a minimum
- Spraying pump: 3-inch centrifugal pump with 3-inch suction fittings with a maximum output of 1,000 l/min.

Patented suspension concept

- Newly developed boom suspension in parallelogram design – hydraulically suspended and dampened. The weight distribution of the Leeb GS enables the parallelogram design.
- Avoidance of boom tilt when cornering on the headlands.
- Soft and stable boom position, even in hilly terrain and when working at high speed.
- The geometry of the parallelogram is shaped in such a way that the boom is guided close to the axle. The suspension is extremely torsion-resistant and thus perfectly suitable for the automatic boom control system BoomControl.
Terminal versions with ISOBUS system:

**Basic-Terminal/Basic-Terminal TOP**
- Monitoring and control of the sprayer
- Control of all necessary spraying functions from the cabin
- The BASIC-Terminal TOP additionally offers the possibility of order processing.

**COMFORT-Terminal**
- Particularly large colour display for monitoring and controlling the sprayer
- Maximum overview – e.g. spraying data in the headline and GPS data on the main page
- Control of all necessary spraying functions from the cabin
- Due to the display size perfectly suitable for GPS functions like for example automatic section control, Section-Control and Parallel Tracking.

**Touch 800-Terminal**
- Latest Touch technology – 800 x 600 pixel TFT-Dualtouch-colour display
- Individually extendable due to APP&GO®

**Touch 1200-Terminal**
- 12,1” Touchscreen display with glass surface
- USB connection for transmitting order data
- 2 camera connections
- Due to the layout manager can be used in portrait and landscape format
- Landscape format: display of an application in normal view and up to 4 other applications in reduced view
- Portrait format: simultaneous handling of two applications in normal view.

**Multifunction joystick**
- Comfortable handling via joystick. All important boom functions as well as the section control can simply be selected via the multifunction joystick.

**Parallel Tracking**
- Uses corrected GPS signals
- Identifies position of the machine and shows this information on the display
- A mobile guideline in the display shows the driver if he is exactly within the track
- Recommended for pre-emergence treatments without track markings

**GPS-controlled section control**
- Possible savings: as overlappings on the headlands are reduced, savings on agents of up to 3% can be achieved.

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**MAXIMUM POWER DUE TO WELL-KNOWN OPERATING CONCEPT**

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MAXIMUM POWER
DUE TO INTELLIGENT APPLICATION TECHNOLOGY

**Power by diversity**
- Variable nozzle spacing 50 or 25 cm
- With a 25 cm nozzle spacing the target area distance is reduced to an optimum
- Pneumatic individual nozzle control enables individual and intelligent application technologies
- Outstanding penetration and wetting of the crop
- Variable nozzle body combinations:
  - 1-0 one single nozzle body every 50 cm
  - 1-0 (3M) one manual triple nozzle body every 50 cm
  - 1-1 one single nozzle body every 25 cm
  - 2-0 one dual nozzle body every 50 cm
  - 2-1 one dual nozzle body every 50 cm, 1 single nozzle body as intermediate nozzle
  - 2-2 one dual nozzle body every 25 cm
  - 4-0 one quadruple nozzle body every 50 cm
  - 4-2 one quadruple nozzle body every 50 cm, 1 dual nozzle body as intermediate nozzle

**Multi-Select-System**
- Various possible combinations
- Up to 4 nozzles per nozzle carrier
- Switchable from the tractor cab
- Always setting the optimal pressure range and the matching nozzle size without having to interrupt work
- Fully automatic control:
  - Control of nozzle size and nozzle combination while matching the spraying quantity at the same time
- Manual control:
  - Targeted switching on or off of individual nozzles or nozzle combinations
- Optimal distance specification management along waters and terrestrial structures
- Wide offer of nozzles from different manufacturers

Extensive tests in our wind channel revealed differences in the drift characteristic
**THE Leeb BOOM:**
**MATURED TECHNOLOGY, WELL THOUGHT OUT DOWN TO THE SMALLEST DETAIL**

### Boom variants
- Basic boom variants in working widths ranging from 21 to 42 meters
- Different folding variants enable individual solutions with respect to working widths

<table>
<thead>
<tr>
<th>Boom variants</th>
<th>Optimal transport position by folding of boom wings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boom: 5-piece with reduced working width 12 m</td>
<td>— Boom does not reach to the front towards the tractor cabin</td>
</tr>
<tr>
<td>Boom: 7-piece with reduced working width 12 m and 21 m</td>
<td>— No damage to the cab roof</td>
</tr>
<tr>
<td>Boom: 7-piece with reduced working width 24 m</td>
<td>— No dripping spraying mixture at the rear of the tractor</td>
</tr>
<tr>
<td>Boom: 7-piece with reduced working width 27/28 m</td>
<td></td>
</tr>
</tbody>
</table>

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**Folding of the machine**
NightLight: OPTIMAL SPRAYING CONTROL DURING THE NIGHT

- Innovative LED-technology ensures optimal illumination
- Highly focused light penetrates all spraying cones
- Optimal spraying control also during dusk and night
- One extremely strong LED spotlight specially adapted to the Leeb GS per boom wing
- 100% control of nozzle function – also in section mode
- More safety and efficiency during spraying work around the clock
- No extensive maintenance and cleaning work
- Automatic cleaning with a washing system
AUTOMATIC BOOM CONTROL

BoomControl Pro

- Automatic boom control to maintain an exact, lowest possible working height even at high operational speeds in very hilly terrain
- Safe and stable boom control even below 50 cm
- Prerequisite for minimum drift
- Boom is completely decoupled from the vehicle
- No compromise between damped and freely suspended boom

- Active boom adjustment via the height control of the central part
- Adaption to the terrain due to parallel bending of the boom arms combined with a turning of the central part (controlled by 4 sensors). Extendable by 2 sensors for row cultures.

BoomControl Eco

- Automatic boom control to maintain an exact, lowest possible working height even at high operational speeds in flat or slightly hilly terrain
- Safe and stable boom control even below 50 cm
- Prerequisite for minimum drift
- Boom is completely decoupled from the vehicle

- No compromise between damped and freely suspended boom
- Active adaption of the boom to the terrain by 2 sensors. Extendable by 2 sensors for row cultures.

The boom is automatically controlled via the terminal. The target area distance is individually adjusted according to prevailing conditions. The actual distance can be continuously checked in the terminal.
STRONG, CONVINCING ARGUMENTS

— Frame design with optimized centre of gravity (low centre of gravity)
— Continuous ground clearance
— Crop protecting, smooth underfloor design
— Large tyres possible (520/85 R46)
— The standard suspended axle ensures smooth travel behavior and exact boom guidance
— Steering axle (optional) ensures in-track following
— New type of pressure control by controlled pump speed
— Pumping capacity up to 1,000 l/min

— Powerful induction hopper made of stainless steel
— CommandBox control concept
— Central arrangement of control units
— Compact external dimensions in transport position
— No parts protruding towards the tractor
— High working speed due to the air cushioned folding boom suspension
— Less drift and high working speeds due to the automatic boom control
— NightLight: strong LED spray cone illumination
— Integrated overload protection in the boom

SELECTION OF OPTIONS

— 12 tonne towing hitch
— High pressure cleaner with hose reel for external cleaning
— LED-headlights with washing system for spraying cone illumination
— Wind meter
— Section-Control (automatic section control)
— S-Box: for selective switching of partial widths (spot treatment)
— Boundary-nozzle control
— Drag hose system
— Camera system for the area behind the machine
### TECHNICAL DETAILS

<table>
<thead>
<tr>
<th>Measure and weights</th>
<th>6 GS</th>
<th>7 GS</th>
<th>8 GS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curb weight (kg)*</td>
<td>5,500</td>
<td>5,540</td>
<td>5,610</td>
</tr>
<tr>
<td>Tongue load empty/full (kg/water)**</td>
<td>870/3,000</td>
<td>870/3,500</td>
<td>900/4,000</td>
</tr>
<tr>
<td>Axle load empty/full (kg)</td>
<td>4,630/9,450</td>
<td>4,670/9,610</td>
<td>4,710/10,000</td>
</tr>
<tr>
<td>Overall length max. (transport position) (m)</td>
<td>8.30</td>
<td>8.30</td>
<td>8.30</td>
</tr>
<tr>
<td>Transport width (transport position) (m)</td>
<td>2.80</td>
<td>2.80</td>
<td>2.80</td>
</tr>
<tr>
<td>Height (m)</td>
<td>3.60</td>
<td>3.60</td>
<td>3.60</td>
</tr>
<tr>
<td>Track widths (m)</td>
<td>3.80/2.00/2.25</td>
<td>2.00/2.25</td>
<td>2.00/2.25</td>
</tr>
<tr>
<td>Ground clearance axle (m)</td>
<td>0.85</td>
<td>0.85</td>
<td>0.85</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tank</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Nominal volume (l)</td>
<td>6,000</td>
<td>7,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Actual volume (l)</td>
<td>6,500</td>
<td>7,400</td>
<td>8,400</td>
</tr>
<tr>
<td>Fresh water tank (l)</td>
<td>530</td>
<td>530</td>
<td>530</td>
</tr>
<tr>
<td>Hand wash tank (l)</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

* Data with 36 / 24 m boom and tyre 520 / 85 R 46
** The vertical and axle loads have been weighed while the tank was filled with water. If other liquids with higher density are used, this may have a consequence on the filling quantity and thus on the max. allowed vertical and axle load.

### Spraying boom

<table>
<thead>
<tr>
<th>Working widths</th>
<th>6 GS</th>
<th>7 GS</th>
<th>8 GS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working height (m)</td>
<td>0.3 - 2.5</td>
<td>0.3 - 2.5</td>
<td>0.3 - 2.5</td>
</tr>
<tr>
<td>Pumping capacity (l/min)</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Working pressure, max. (bar)</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Working speed (km/h)</td>
<td>4 - 18</td>
<td>4 - 18</td>
<td>4 - 18</td>
</tr>
</tbody>
</table>