Ultimate Front Loader Control

LCS™ - a revolutionary control system for your front loader. Your tractor has never been so efficient.
The new joystick spares both shoulders and arms.

Kjell Lindgren, entrepreneur, Umeå, Sweden
A technical breakthrough, giving you unsurpassed user-friendliness

The Loader Control System strengthens Ålö’s position as the world-leading manufacturer of high quality front loaders. LCS™ brings together many technical innovations in one system:

- An entirely new type of valve. The unique LCS valve program has been specially developed for the requirements and functions of the front loaders of today and tomorrow, giving a level of control that no other manufacturer can provide.
- An integrated multi-coupler* which saves time and also protects the environment.
- An entirely new, thumb-controlled joystick which further improves ergonomics and driving characteristics.

Each one of these innovations provides significant advantages for you and your tractor. Together, they enable entirely new levels of loader control, user-friendliness, efficiency and safety. LCS™ will be standard on all new Quicke and Trima loaders during autumn 2010. There is also the opportunity to upgrade existing loaders and tractors with the new system.

Welcome to the future.

* optional

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The new way to handle the loader with just your thumb – making your day to day work playfully simple.

Serge Mazeron, cattle farmer, Biollet, France

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The new control system offers a wide variety of functions that I didn’t know about before.

Poller Josef, biogas plant, Oberbayern, Tyskland
One system.
Hundreds of advantages.

Valve program

Optimises control and driving characteristics

At the “heart” of LCS™ is a unique valve program; the only valves in the world that have been specially developed for the specific functions and requirements of front loaders. This uncompromising attitude offers you many advantages: outstanding control, direct response and drivability through optimally-adapted flow – for every occasion and regardless of load weight. The valve is also energy efficient and therefore enables lower fuel consumption.

Many advantages:
- Complete control of heavy loads thanks to the load-independent oil flow. This means that the loader speed is always the same, no matter what load is carried in the implement.
- Easier to perform multiple functions, such as lowering and crowding.
- Ålö LCS™ Open Centre – the valve has the same properties as the Ålö LCS™ Load Sensing-valve. Both valves are based on the same load sensing principle.
- Energy-saving low pressure regeneration.
- The cylinders are always filled with oil, which eliminates waiting time and cavitation.
- Both lift and implement circuits feature a float position. In addition to improved driving benefits, this also enables easy connection and disconnection of the loader and implement.
- The compact design means that the valve is ideally placed, whilst maintaining the driver’s vision.

Multi-coupler

Smart and easy to handle with integrated electrical connector

The new unique flat-face multi-coupler with integrated electrical connector is the heart of LCS™, which, through its ingenious construction, saves time and also protects the environment. The compact design with swivel connections makes it very simple to use with a single hand. The construction of the multi-coupler means that it can be connected and disconnected even when pressurised. All quick connections are flat-face style and spill-free, making them simple to clean and maintain.

Many advantages:
- Both valves and hose kits have flat-face connections
- The multi-coupler is connected simply, with a single lever incorporating a locking catch.

Technical data

<table>
<thead>
<tr>
<th>Max system pressure:</th>
<th>250 bar</th>
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<tr>
<td>Max tank pressure:</td>
<td>20 bar</td>
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<td>Servo pressure:</td>
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<td>Max recommended flow, fixed pump:</td>
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<td>Max recommended flow, variable pump:</td>
<td>150 l/min</td>
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<tr>
<td>Regulated flow to loader:</td>
<td>Max 90 l/min</td>
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Which joystick meets your requirements best?

Electronic joystick or traditional cable control — you choose what suits you and your tractor best. Below you will find an overview of the functions of each joystick:

**Electronic joystick, thumb-controlled**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Mechanical joystick, cable operated**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Backlit display**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Fully proportional lifting and lowering of loader**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Fully proportional tilting and crowding of implement**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Float position on lowering movement**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Float position on tilt movement**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Lowering movement with regenerative function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Tilt movement with regenerative function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**3rd hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**4th hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Soft shifting between implement movement and 3rd hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Hydraulic implement lock**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Quick menu**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Shock absorber, on/off**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Tortoise mode**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Shake function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Visual AAC function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Transport mode with shock absorber**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Pressure relief function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**On/off 3rd hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Locked 3rd hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Continuous flow 3rd hydraulic function, configurable**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**On/off configuration of 4th hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Hare function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Configuration menu**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Setup of 3rd hydraulic function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Setup of 3rd hydraulic function on/off, (+/−) direction**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Programmable Quick Selection button**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Adjustable shake function in 9 steps**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Configuration of tortoise mode in 3 steps**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Setup of tortoise speed lift and lowering**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Setup of tortoise speed tilt and crowd**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Setup of display contrast**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Diagnostics menu**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Factory setting**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Service menu**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Non leakage flat-face quick couplers**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Multi-coupler with integrated electrical connection**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Integrated accumulator**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Automatic charging of accumulator**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Dust cover**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Valve that does not effect the tractor system pressure**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

**Load sensing valve with heating function**
- ElectroDrive LCS™ Professional
- EasyDrive LCS™
- ErgoDrive LCS™

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**Electronic, thumb-controlled user-friendliness**

Topping the range, is the **ElectroDrive LCS™ Professional** — a thumb-controlled joystick which improves ergonomics and drivability. You will see that it offers considerably greater control as well as a more relaxed manner of working, with minimal physical exertion. The joystick has a very flexible mount; called the ‘swan neck’, which — in a completely new way — enables the driver to find the best position to operate the loader. The joystick’s ergonomic shape and flexible mount also minimises the vibrations and movement caused by driving over uneven and rough terrain. Other significant advantages are the ideally-located display with a user-friendly menu system, giving an overview and quick access to all loader functions.

**Many advantages:**
- New, unique control of the electronic joystick. Choose between controlling the loader with your thumb and index finger, or just your thumb.
- Optimal ergonomic shaped hand grip. Particularly advantageous when used for lengthy jobs.
- Easy to use display with backlighting. Information just as visible when used at night as during the day.
- The electronic joystick is available in two different types — the ElectroDrive LCS™ Professional and the EasyDrive LCS™, enabling you to adapt your LCS™ entirely to your own needs.
- An alternative is the mechanical, cable-guided single lever control ErgoDrive LCS™.
We’ve had a fantastic response, not least in terms of how much LCS improves loader control...

Anders Lundgren, Product Development Manager at Ålö AB
What was the idea for LCS™, how did it start?

There were a number of linked reasons. Firstly, we wanted to create an entirely new, improved joystick for our professional customers. Secondly, we wanted to produce a simpler electronic joystick as an alternative to our traditional, mechanical single lever control. And thirdly, we wanted to produce a new, compact and easy to handle multi-coupler. When going through the wish list with our partner, creating an entirely new valve was suggested — the first ever produced for front loaders. If we had pursued this, the project would have grown considerably – not least in terms of costs. At the same time, we realised that an entirely new control system would offer our customers several advantages. We therefore took the decision to take the risk and use as many resources and as much time as necessary.

How has the timeframe shaped up for LCS™?

We started the LCS™ project in 2006. The first year was mainly taken up with discussions and brainstorming for the LCS™ components, and later, how exactly the product would look. In 2008, we had all the pieces of the puzzle in place, including investments in constructing an entirely new valve. Our goal was then to showcase LCS™ at Agritechnica 2009, and launch the product in 2010 – in which we were also successful.

Were there any key issues during the project?

A large challenge was the work in adapting and optimising LCS™ to all the various tractor manufacturers’ hydraulic systems. This included the construction of a test unit which could simulate each of these hydraulic systems. I would like to thank the hydraulic experts in the project group who solved this problem! Another issue was how the new, thumb-controlled joystick should be shaped. To be able to drive and hold the joystick using only your thumb whilst maneuvering the loader was something entirely unique and therefore an alien concept to the users. At the same time, we saw that it gave entirely new levels of control, for example, when driving over rough and uneven ground. This is thanks to the fact that you can hold the joystick constantly, without the risk of unintended maneuvers.

How did you test the system and the joystick?

To begin with, we worked extensively with ergonomic experts in order to find an optimal design. The next stage was sending around 40 test units to professional farmers in North America and Europe. The test users closely followed a pre-prepared program where all possible maneuvers and functions were tested – so that we could obtain as comprehensive a result as possible.

How was LCS™ received by the test customers?

We had a fantastic response, not least in terms of the improved control. This was partly thanks to the joystick, but also because the system constantly ensures the cylinders are filled with oil, meaning that the loader always reacts without any delay.

So, a success with the users then. How would you yourselves judge LCS™ compared with other Ålö innovations?

LCS™ is very similar to the 2004-2005 launch of our loader range Trima Plus and Quicke Dimension. And you should remember that we built an entirely new factory in order to achieve that. LCS™ is just as innovative, as there just hasn’t been anything like it before. LCS™ raises the bar for the entire front loader industry. Above all, it offers new opportunities to users all over the world to gain maximum use from their tractor.
We maximise the use of your tractor. Every day.

Ålö’s aim has been the same for over half a century: that our customers can clearly gain from choosing us as their supplier; be it in terms of time, money or other important customer advantages. Thanks to our focus on use, Ålö is today the world’s leading front loader manufacturer within the field of agricultural tractors over 50 hp.

Ålö is characterised by rapid product development and systematic quality control, both when we introduce new products and in our daily production. We are currently represented in over 40 countries with a leading position in over 15 of those. Around 90% of our total production is exported.