

VALTRA

Power Partner

Valtra LHLINK – a new generation front linkage



Turning front linkage – Valtra LHLINK



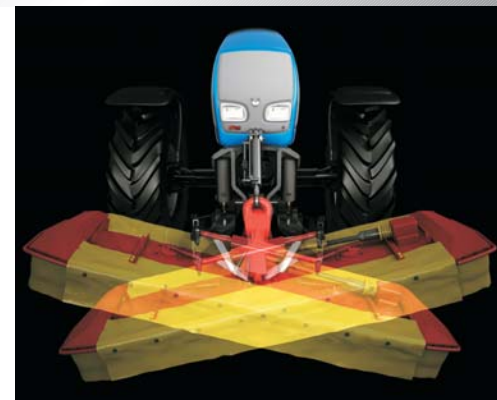
Turning and levelling

Valtra is introducing a new generation of front linkage. Valtra's innovative LHLINK front linkage attaches to the tractor's frame by a vertical pivot, allowing the linkage to turn in the desired amount with the front wheels or even independently of the front wheels. In addition, the levelling of the lifting arms in relationship to each other can be adjusted vertically. The lifting capacity of the Valtra LHLINK front linkage is 3.5 tons.

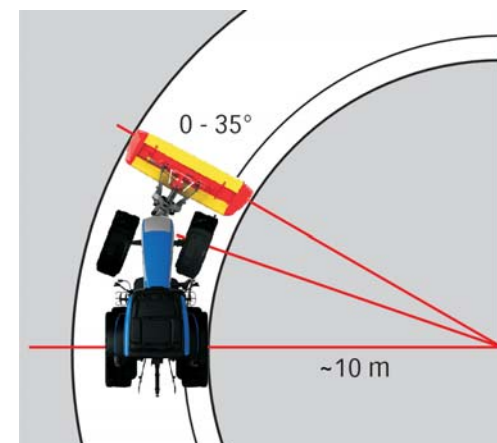
Four control modes

Four control modes are available for adjusting how the front linkage turns:

- 1 The front linkage turns fully independently of the front wheels.
- 2 The front linkage turns in relation to the front wheels, and the ratio between the turning angle of the front linkage and the steering angle of the wheels can be adjusted infinitely. The response in the middle of the adjustment range is 50%, so at a 35-degree steering angle the front linkage turns 17.5 degrees. At a response of 1:1 the turning angle of the front linkage is the same as that of the front wheels all the way up to 35 degrees, which is the maximum turning angle of the front linkage in either direction.
- 3 The front linkage operates as above, but the central position of the front linkage can be varied in either direction.
- 4 The fourth mode is designed especially for operating front and rear mower combinations, allowing a higher turning angle for the front linkage than for the wheels.



The position of the lifting arms in relation to each other can be adjusted hydraulically, after which the position is locked hydraulically. There is no mechanical torsion bar between the lifting arms, which saves space. The cylinders are equipped with linear transmitting the position to the electronic control unit.



The implement applies Ackermann's steering geometry, whereby a line drawn from the implement crosses a line drawn from rear wheels at the same point as lines drawn from the front wheels.

Versatile combinations

A front linkage that turns in relation to the front wheels is a great advantage when attaching front mowers and mowing combinations at the front and rear, for example. Valtra's front linkage can turn a mower at its full width within a turning radius of 10 metres.

This range of adjustments eradicates underlap and offers a high quality of work. The same steering principle can also be applied to the operation of municipal brushing implements. Since the implement follows the turning radius, less lateral loads are put on the implement. The flexible front linkage does not restrict in any way the use of the PTO, as the universal joints are located around the pivot centre.



The considerably higher degree of freedom of the lifting arms makes it easier to attach implements while also increasing safety.



The turnable linkage and independent levelling of the lift arms make the hooking of the implements easy and safe.





Technical data

Front link category	2
Lifting ability at coupling hooks	3500 kg
Double-acting cylinders	standard
Lifting range	840 mm
Lower link arms	Removable and pivotable
Lower link control	Electro-hydraulic position control with single arm adjustment
Catch hooks	LH Lift 3L, electro hydraulic remote control optional
Top link	Cat. 2
Turning angle	+/- 0-35°
Turning angle control	Electro-hydraulic with 4 modes
Front PTO shaft speed (rpm) / Sense of rotation	1000 / clockwise in direction of travel
PTO shaft profile DIN 9611	1 3/8" (35 mm)

Valtra LHLINK front linkage has been developed together with the major Finnish parts supplier LH Lift Oy and Afcon Oy, an agricultural and forest technology R&D company.



Valtra LHLINK front linkage received the silver Innovation Award at the Agritechnica exhibition in Hanover, Germany in 2007.

Advantages

- Electronic control of the hydraulic turning effect of the linkage by four modes
- Hydraulic levelling of lifting arms by using cylinders with linear or angle sensors.
- Possible to use full working width down to 10 m turning radius
- Less lateral forces to the implements in turns
- Better quality of work (better swaths for next operation)
- Full PTO power available, swivelling angle ± 35 deg.
- Levelling function gives more possibilities to control implements
- Thanks to many degrees of freedom hitching the implements is fast and safe
- Remote unlocking of the link arm hooks are available