

ELHO Wrappers



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Ensure the quality of the silage with an ELHO wrapper

ELHO has a long experience of bale wrapping and has a wide range of wrappers, from smaller three-point models to large baler-wrapper combinations. We develop and manufacture all of ELHO agricultural machinery at our factory and we follow the development in agriculture carefully to be one of the leading manufacturers. At ELHO we have the entire process, from product development to manufacturing, under the same roof.



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ELHO Sideliner 1520 M and 1520 EW

Easy-to-use, towed basic wrapper

The ELHO Sideliner 1520 is an affordable and reliable trailed bale wrapper. The monitor, the cutter and the renewed orbital wrapping system make the 1520 an excellent choice. The Sideliner 1520 is manufactured in two versions; the 1520 M with cable control and the semi-automatic 1520 EW (EasyWrap). The loading in the EW model uses a joy-stick and wrapping is automatic. ELHO has manufactured thousands of Sideliner 1520 wrappers and the success continues.

The wrapping table of the machine is robust and equipped with three chain driven draw rollers with a total of nine anti-slip belts. The wrapping table is mounted directly to the chassis which enables a low loading, discharging and wrapping height. Thanks to its low center of gravity, the machine is also stable on slopes.

The construction of the patented loading fork ensures that the bale is placed in the center of the wrapping table,

it's correct place and position. The weight is distributed evenly over both the wheels and the tractor during the loading operation.

Four end support rollers keep the bale positioned correctly. Also the low offloading height of the bale reduces the stress on the bale, and the reinforced bale discharging mat lessens risk of damage to the bales especially on hard surfaces.

Good-quality silage needs an airtight plastic cover. Thanks to the hydraulic synchronization, of the wrapping arm and the hydraulic motor of the wrapping table, both always receive the same volume of oil and the overlapping stays even.

The pre-stretcher tensions the plastic tightly round the bale and ensures good-quality silage. The hydraulic film cutter collects the plastic and ensures a clean cut as well as holding the film firmly for the next bale.



Thousands of satisfied users cannot be wrong – the ELHO Sideliner 1520 is a very reliable and user-friendly wrapper.

The renewed 1520 models have a chainless transmission to the wrapping arm. The power transmission from the hydraulic motor uses an enclosed cog gear mechanism, the tight plastic cover ensures reliability.



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ELHO Sideliner 1650 M

Increase round bale wrapping speed

The ELHO Sideliner 1650 wrapper loads the bales from the front. Therefore the wrapper is easy to use on smaller fields. The loading arms do not drag on the ground so the grass is not damaged and soil does not get onto the wrapping table together with the bale. This ensures a good, clean quality of silage. The control of the manual ELHO Sideliner 1650 M uses a cable remote control from the tractor cabin. The bale sizes can be \varnothing 1,1-1,6 m.

The ELHO Sideliner 1650 M has as standard a single axle but double-axle bogie wheels are available as an

option. The wide, low-pressure tires and an even load distribution keep the wrapper firmly on the ground even in wet fields. The short symmetric bogie is gentle on the grass even in sharp turns. The ELHO Sideliner 1650 M, equipped with two 750 mm pre-stretchers as standard, is a really fast round bale wrapper.

The film cutter takes up the film, holds the plastic firmly and minimizes the risk of tearing the plastic. The tensioning units follow the plastic rolls surface and keeps an even tension regardless of the amount of remaining plastic. The monitor notifies clearly when the desired amount of plastic layers is reached. The monitor has a bale counter and also automatically registers the total number of wrapped bales.

The robust bale lift cylinder can load up to a 1200 kg bale, with an optional second cylinder this can be increased to 1600 kg, at just 150 bars pressure. The lift cylinder is mounted directly to the framework and the weight of a heavy bale is transmitted directly to the load bearing wheels. The ELHO Sideliner 1650 framework was developed in cooperation with the Technical Research Centre of Finland based on conducted stress analyses and computer simulations.



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ELHO Sideline 1650 A

Behind the tractor or the baler - the Sideline 1650 A is always effective

The fully-automatic Sideline 1650 A senses the bale in the field, lifts it on to the wrapping table, wraps the bale and the driver can then offload it or leave it on the wrapping table. The bale loading starts automatically when the bale touches the sensor between the loading arms. The new Sideline 1650 models are very flexible, the round bales can have a diameter of between 1,1-1,6 m. The flow control valve, the mudguards and the taillight series are standard equipment and there is also a wide range of useful optional equipment. The Sideline 1650 A can be built into a baler-wraper combination - a true "one man machine". This provides remarkable cost and time savings!

The ELHO Sideline 1650 A can also be attached to the back of a baler with an optional attachment mechanism. Time and costs are minimized when wrapping and baling are made simultaneously, without compromising quality. Also smaller, separate fields can be harvested economically. The combination wrapping takes place fully automatically after that the bale is been ejected from

the balers chamber.

The wrapper is controlled fully automatically with the help of magnetic sensors and proportional hydraulics: the wrapping unit starts and accelerates steplessly, without damaging the film. The wrapping process is monitored in three ways:

- The wrapping speed is measured continuously and the required oil volume is directed through the proportional valve to the hydraulic motors.
- The position sensors ensure that the plastic is cut cleanly, and that the wrapping arms are in the correct position both during the bale loading and offloading the wrapped bale.
- When, for example, one film roll is empty, a sensor reports this to the cabin and the wrapper continues the wrapping with just one unit. When both units are empty, the wrapping arms stop. After reloading new plastic rolls, the driver just presses the Auto-Start button and the wrapping continues until the bale is finished.

It is also possible to run the complete wrapping process with the monitor control switches. The Sideline 1650 A always gets the work done!

When the bale is ejected from the baler to the wrapper, loading starts as soon as the bale touches the sensor flap on the loading arms. The arms are pressed to the both sides of the bale and it is lifted softly to the middle of the table. The stress on the baler (as a baler/wraper combination) remains small as the bale is very close to the wheel axle of the wrapper during both loading and wrapping.

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The ELHO Softliner series provides many alternatives, cable-, semi-automatic or automatic control. Depending on the model Softliner wrappers can wrap bales from Ø 0,9-1,4 m.

The ELHO Softliner model series

Effective options for wrapping bales of all sizes

ELHO's high-quality Softliner series consists of three models; Softliner 1000, 1400 and 1500. The Softliner series has cable, semi-automatic (EasyWrap) or automatic control machines with one or two wrapping arms. All Softliner three-point wrappers can be mounted either to the front or to the back of the tractor.

Bale loading takes place from the back of the machine in the driving direction of the baler. The loading is especially easy when the Softliner is connected to the

tractors front lift. Small tractors can also be used as there is very little ground pressure during loading and the wrapping stages if the wrapper is lowered to the ground. The baling and wrapping of smaller areas can be made almost simultaneously with the wrapper mounted at the front, as there's no need to change the machine: this saves time and efficiency increases.

The three drive rollers of the wrapping table ensures that the bale rotates properly. The hydraulic synchronization between the wrapping arm and the wrapping table gives an even overlap with air tight bales, regardless of the wrapping speed. The Softliner M models have a monitor with revolution and bale counters, the EasyWrap and Automat models also have handy control units.

The bales can be discharged in two ways: either softly with the help of the loading/offloading bar, or the bale can simply be tipped off the wrapping table and it rotates over the bar. The second option is faster, but offloading with the bar is recommended especially on steep slopes to keep the bale in place.

ELHO Softliner – high-quality silage with high-quality machinery



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The ELHO Silomatic 1010 is a safe, reliable towed wrapper, with which it's possible to wrap one bale and keep another on the loading fork while driving to the storage site. An easy-to-use cable control with monitor is standard.

ELHO Silomatic 1010 and 420 ACI

High-quality silage and the best cost-effectiveness

The trailed ELHO Silomatic 1010 has been our most sold wrapper model for decades. Its robust chassis, the turntable and the powerful loading fork make the transportation of two bales at the same time possible, and the asymmetrical positioning of the turn table ensures the stability of the machine.

The Silomatic 1010 wrapper is equipped with two large chain-driven draw rollers, whose mechanical rotation is synchronized with the rotation of the bale. The wide standard wheels of the bogie axle protect the soil from compression and they give good support in wet fields too. The fork-side bogie is partially built-in, which also improves stability during loading.

The ELHO Silomatic 420 ACI is a three-point mounted wrapper suited for wrapping in the field as well as in the farm yard. Its functions are controlled automatically but also manual use is possible. The

monitor can control the whole wrapping process according to the options set by the user: the driver just needs to lift the bales on the wrapping table, push the Start-button on the remote control in the cabin and afterwards remove the wrapped bales.

ELHO 420 ACI – mounted at the front or back of the tractor



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ELHO Tube 2020 ACI

Every bale wrapped with a Tube saves plastic costs

The ELHO Tube 2020 ACI was developed for effective and safe wrapping of silage bales, and has been manufactured since 1993. The ELHO Tube is designed to work under all conditions. The Tube 2020 ACI has a very durable and solid construction: the wrapped bale-tube runs from the machine directly on to the ground at the correct angle, the machine has its own hydraulic system with two pumps, variable plastic overlapping, an automatic film breakage sensor and option for adding extra plastic film to the bale joints.

The Tube 2020 ACI is easy to control. Thanks to the computer control, possible problems can be found quickly with the help of a sensor test. There are no mechanical steering bars that can bend or break. This saves costs and work efficiency increases. Also the large, standard wheels of the machine make handling easy: even wider tires are optional – for firm support in all conditions.

The Tube 2020 ACI is fully-automatic. The wrapping starts when a bale is dropped onto the wrapping table or when the remote-control button is pressed. It has a wrapping capacity of 120 round bales per hour, if the availability of bales is continuous. The Tube 2020 ACI wraps not only large round bales but also rectangular bales, even four at a time.

One of the most important benefits of the Tube 2020-wrapper is the amount saved of plastic. Plastic consumption and costs are halved when using the Tube wrapper, so it's easy to make significant cost savings. It is also easy to see how the Tube 2020 ACI saves money. The Tube is an investment which will pay for itself very fast.



The ELHO Tube 2020 is available either with an 11 hp petrol engine or 16 hp Lombardi Diesel engine. They both have electric start as standard.

The ELHO Tube can be controlled in three different ways; fully automatic, from the remote control or from the side of the machine.



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ELHO wrappers technical information 2011-2012:

Model	1650 A	1650 M	1520 EW	1520 M
Control	automatic	cable	semi-automatic	cable
Total length, m	4,5	4,5	4,2	4,2
Width, m	2,73	2,73	2,5	2,5
Height, m	2,85	2,85	2,7	2,7
Round bale diameter, m	1,0-1,6	1,0-1,6	1,0-1,5	1,0-1,5
Oil flow l/min at 150 bar, min/max	20/50	20/50	20/60	20/60
Film stretcher Als, per x film width max	2x750	2x750	1x750	1x750
Loading power kg, 150 bar (with red one cyl.)	1200	1200	1000	1000
Loading power with additional cylinder	1800	1800	--	--
Wheel size	26,00x12.00-12	26,00x12.00-12	26,00x12.00-12	26,00x12.00-12
Boogie wheel	nd	add. equipment	--	--
Weight, kg	1190	1190	790	790

Model	1000A	1000M	1002A	1400EW	1400M	1500EW	1500M
Control	automatic	cable	automatic	EasyWrap	cable	EasyWrap	cable
Length, m	2,3	2,3	2,3	2,5	2,5	2,5	2,5
Width, m	1,7	1,7	1,7	1,85	2,05	2,05	1,85
Round bale diameter, m	0,9-1,1	0,9-1,2	0,9-1,1	1,2-1,4	1,2-1,4	1,2-1,4	1,2-1,4
Oil flow l/min, min/max, 140 bar	20/45	20/46	20/45	--	--	--	--
Oil flow l/min, min/max, 150 bar	--	--	--	20/45	15/45	20/45	15/45
Film stretcher Als, per x film width max	1x500	1x500	2x500	1x750	1x750	2x750	1x750
Loading power kg, 150 bar	750	750	750	1000	1000	1000	1000
Weight approx., kg	560	560	620	850	750	1000	750

Model	2020	Stomatic	420 ACI	910
Guiding system, ACI, automatic infrared control	nd	ACI, auto infrared	nd	cable control
Length, work position, m	6,8	2,3	2,3	3,5
Length, transport position, m	6,0	1,35	1,35	2,35
Width, m	3,0	1,0-1,5	1,0-1,5	1,2-1,5
Height, m	3,0	700-1000	700-1000	700-1000*)
Round bale diameter	1,2-1,6	Oil flow Varia, min-max, 150-200 bar	15-35	15-45
Square bale dim. height x width, max, m	1,6-1,4	Film pre-stretcher red, per x film width, mm	1x750	1x750
Round bale weight, max kg	1000	Turntable rpm max, speed	20	20
Square bale, max kg/m	850	Recommended oil flow, mc - max, l/min	15-35	20-45
Film stretcher, per X film width, mm	2x750	Hydr. Connections	pressure + free return	pressure + free return
Amount of film layer	adjustable	Lift capacity of load fork, kg, 150 bar	--	1250
Front wheel steering	hydr.	Wheel size	--	26x12.00-12
Tail ramp lift to transp. pos.	hydr.	Weight, ca kg	650	1150
Front wheel brake	nd			
Side support rollers	4			
Power source, Kohler 11 hp, petrol, altern	alternative			
Power source, Lombardini 16 hp, diesel, altern	alternative			
Wheel size	14.0/65-16			
Weight approx., kg	2800			

*) with counter weight



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Durable power machines for agriculture and contracting

Tedders and swathers

ELHO manufactures both traditional roller tedders and roller swathers. These are suitable for harvesting dry hay and forage. Some of the roller swathers are equipped with the HydroBalance suspension system that guarantees a flexible surface touch and clean forage.



Feeding machines

ELHO bale shredders make feeding easier and save several stages in the work flow. The feed can be distributed straight to the feeding table (to the right or left) or be blown to a distance of up to 15 metres. Bale shredders work well even if the fodder is frozen.



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Mowers

ELHO provides an extensive range of mower conditioners and mowers in different sizes. Many of our ELHO machines feature a HydroBalance suspension system, which allows the machine to follow the contours of the ground smoothly and avoid obstructions. We produce double, front lift, back lift and roller mower conditioners, trailed mower conditioners, trailed mower conditioners with side flow, and disc mowers.

Machines for landscape care

ELHO has designed mulchers for landscape care. They are suitable for thicket clearing, roadside pruning, and field cutting. These machines are extremely strong and powerful, and they have an excellent working range. The cutting head can be tilted 90 degrees up and 35-45 degrees down, depending on the model. Our selection of machines includes both rotor and chain mulchers.



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Oy El-Ho Ab

- Founded in 1968, still owned by the family who founded it
- Located in Pännäinen, 10 km from Pietarsaari in western Finland
- Approx. 90 employees
- Proportion of export approx. 60 %
- Manufactures approx. 1500 units/year
- Has its own manufacturing premises approx. 7200 m²



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