

KIVI-PEKKA

LIVAKKA



PELTUOTE

FINNISH EXPERTISE
FROM THE ROCKIEST FIELDS OF FINLAND





PEL-Tuote started out 30 years ago. The company began to manufacture rock pickers in 1997. Customised rock pickers effectively collect stones from the field before or during sowing, thus protecting field machinery from wear and breakage. In addition to field use, rock pickers can also be used in road work, on golf courses and in landscaping.

The PEL-Tuote product line also includes a disc injector, which was developed in 2009. Our machine offering in slurry handling was expanded when PEL-Tuote acquired Livakka in 2013. Livakka slurry tankers have been manufactured since the 1970s and is one of the most well-known brands in Finland. PEL-Tuote continued with Livakka's development and, today, we can offer our customers slurry tankers from the smallest surface spreader to the largest, most well-equipped contract equipment.

Our slogan "Finnish expertise from the rockiest fields of Finland" perfectly describes our company's philosophy and way of doing things. PEL-Tuote Oy is located in Rantasalmi, amid a land of lakes and fields. Rocky fields and rolling terrain provide a demanding test environment for our products, right outside our factory doors. Our professional staff, which is very familiar with the needs of the agricultural sector, and the high percentage of Finnish-made components guarantee our customers that they are getting a high-quality Finnish product.

In Finland, we sell directly to the end user, except in Lapland, where sales are handled by Lakkapää Oy. Outside of Finland we sell through dealers. We currently export our products to 50 countries, with approximately half of our turnover coming from exports.

In 2017, PEL-tuote acquired a significant share in Tume-Agri Oy, which manufactures and markets agricultural machinery for sowing and cultivation. In April 2021 the companies PEL-tuote and Tume Agri merged into a group and began making strategic choices, with the PEL product focusing on stone picking machines and slurry wagons, while Tume-Agri specializes in sowing and cultivation.

The Tume brandname products are the oldest and most well-known brands in their field in Finland and are sold to end users in more than 20 countries in Europe and Asia. PEL-Tuote sells Tume machines in Eastern Finland, while the rest of Finland sells machines directly from TumeAgri Oy factory in Turenki, Finland.

Read more from our web site: www.pel-tuote.fi



KIVI-PEKKA STONE PICKERS

Save time, money and health

Kivi-Pekka rock picker is designed to remove stones and other solid objects from all types of soil. It removes stones efficiently and clears new fields of tree roots and branches. In addition to fields, Kivi-Pekka can be used for road foundation work, golf courses and landscaping.

Stones are traditionally removed from fields by collecting them by hand. This is not only time-consuming but, at worst, puts people's health at risk due to poor working postures. To make matters worse, the end result is never as good as that attained by mechanical removal. Thoroughly cleared fields yield a better harvest, prevent damage to other farming machinery and lower repair costs.

Kivi-Pekka stone picker is more efficient solution than stone rakes and stone buriers. Kivi-Pekka's performance is in a class of its own: the largest model is able to collect stones from an area 7 metres (23') wide stones even the size of 50

cm (20") diameter. Output is up to 1500 kg (3300 lbs) per minute. The 290 cm (115") tipping height allows the stones to be tipped even onto high dump trucks. This makes it easier to use the stones at other sites.

You don't need a big tractor to use Kivi-Pekka - the biggest Kivi-Pekka machine can be towed with a 100 hp tractor. The Kivi-Pekka machines are customized to meet the customers' needs for the working width and all the accessories.

All these products have been tested in different conditions around the world. Therefore quality products are guaranteed.. Kivi-Pekka rock pickers are expertly manufactured from carefully selected steels and top-notch components with experience gained in 30 years time. Kivi-Pekka stone pickers are used in over 50 countries.



MY OWN KIVI-PEKKA

Kivi-Pekka rock picker can be customised to meet your specific needs.

Compare the widths, accessories and other features and find the optimal solution.

Contact your local dealer.

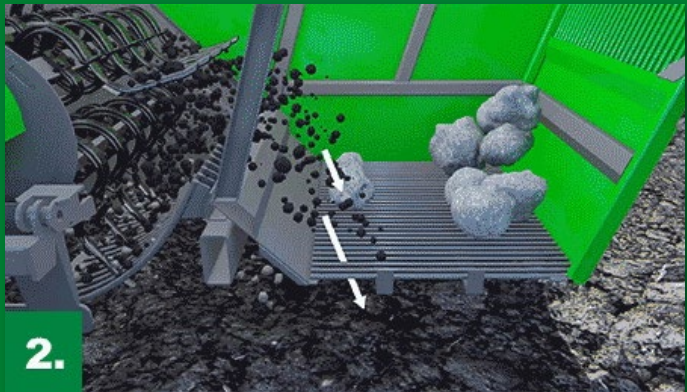


KIVI-PEKKA 4, 5 AND 6

The Kivi-Pekka family already includes five machines of different sizes so that everyone can find one that suits their needs. Differences can be found in size and power, among other features. All machines are customized according to the customer's wishes. The machines have comprehensive standard equipment, but with accessories you can maximize the power of the machine. All the machines are equipped with a sieve according to the cultivation direction, hydraulic lifting and soil collection as standard.

Sieve (in cultivation direction)

The welded sieve is made of special-alloy steel and is available with different spacings. The tines run between the sieve bars the entire length, thus keeping the sieve clean and preventing jamming of rocks.



Hydraulic lift

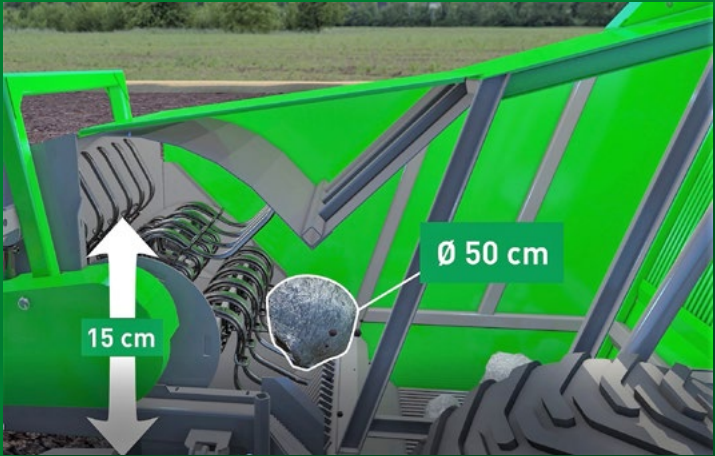
The lifting action is achieved with a hydraulic cylinder, which raises the rakes simultaneously. Mechanical locks secure them into the top position. The operator is able to position the picker in working or transport position from the cab.

Soil sieving system

Soil collection allows the topsoil to end up back in the field. Cleaned rocks can be used in construction or road building, for instance.

Kivi-Pekka separates the soil over three stages:

- 1. Stone enters the machine over the sieve located under the lifting drum.
- 2. Stone is carried to the tank, and the soil in the sieve structure is released back to the field.
- 3. Any left-over soil slides into a separate container located behind the back wall of the stone tank, and gets released at the tipping stage.



Flex Drum - Additional accessories

The lifting drum's power transmission is mounted along the drum frame, allowing the frame and the entire lifting drum to yield upwards, which makes it possible to lift stones 50 cm (20") in diameter. Because of the Flex Drum's hydraulic pressure accumulator, the drum passes over any large stones it comes into contact with. In addition, the drum can be raised into the top position with the hydraulic system, allowing any jammed stones to be released.

The Flex Drum's suspension system protects the sieve and tines against the contact with stones, thereby extending their service life. Thanks to the Flex Drum, no backwards rotation is needed, as the drum can be lifted up and a large stone picked up without stopping.

KIVI-PEKKA 4

Weight 4300 kg (9 500 lbs)
Working width 400 cm (13')
Stone size 2,5 – 35 cm (1-13,7")
Output 700 kg/min (1 540 lbs/min)
Stone hopper volume 3 m³ (3,9 yd³)
Tyre size 560(22")/60-22.5
Power requirement 70 hp
Hydraulics 20 l oil/min (5.3 gal/min)
Running speed 1–6 km/h (0,6–3,7 mph)
Lifting drum tines 18 pcs
Tipping height 290 cm (115')

Reliable powerhouse

KIVI-PEKKA 5

Weight 5300 kg (11 700 lbs)
Working width 500 cm (16,5')
Stone size 2,5 – 35 cm (1-13,7")
Output 1000 kg/min (2 200 lbs/min)
Stone hopper volume 3 m³ (3,9 yd³)
Tyre size 560(22")/60-22.5
Power requirement 80 hp
Hydraulics 20 l oil/min (5.3 gal/min)
Running speed 1–6 km/h (0,6–3,7 mph)
Lifting drum tines 28 pcs
Tipping height 290 cm (115')

Long time favourite

KIVI-PEKKA 6

Weight 5400 kg (11 900 lbs)
Working width 600 cm (20')
Stone size 2,5 – 35 cm (1-13,7")
Output 1200 kg/min (2 645 lbs/min)
Stone hopper volume 3 m³ (3,9 yd³)
Tyre size 560(22")/60-22.5
Power requirement 80 hp
Hydraulics 20 l oil/min (5.3 gal/min)
Running speed 1–6 km/h (0,6–3,7 mph)
Lifting drum tines 28 pcs
Tipping height 290 cm (115')

Ideal solution for large areas





KIVI-PEKKA 7

MAXIMUM EFFICIENCY IN STONE PICKING!

Maximum efficiency and durability in a single package. Impressive in every respect. Kivi-Pekka 7 has a wide lifting drum that allows you to clear large areas easily and efficiently. The largest stone tank in the range adds to its performance.

Weight 6540 kg (14 420 lbs)
Working width 700 cm (23 ft)
Stone size 2,5–50 cm (1"–13,7")
Output 1500 kg/min (3300 lb/min)
Stone hopper volume 5 m³ (6,5 yd³)
Tyre size with bogie 560(22in)/60–22.5
Power requirement 100 hp
Hydraulics 20 l oil/min (5.3 gal/min)
Running speed 1–6 km/h (0,6–3,7 mph)
Lifting drum tines 33 pcs
Tipping height 290 cm (115")

Kivi-Pekka 7 features include stone hopper volume of 5 m³ (6,5 yd³), working width of 7 m (23') and maximum stone size of 50 cm (20") diameter. The model 7 has FLEXTON stone hopper as a standard accessory. The lifting drum is widened and it now has 33 tines. All tine sizes give way sideways to prevent blockages. No backwards rotation is hence required. The 13x50 Flex Drum tine is particularly durable and contributes to extended maintenance intervals. All tines are fitted with auxiliary springs and suspended with rubber buffers. The standard tipping height is 2.9 m/115 in.



KIVI-PEKKA 3,3

Kivi-Pekka 3.3 meter (10,8") stone picker is the latest addition to the Kivi-Pekka rock picker family. In addition to traditional cultivation, the machine is developed for special cultivation and landscaping. Kivi-Pekka 3.3 is a very efficient machine in its size group. It is agile to operate, transport and maintain.

Huge capacity with 2 meter (6,5') wide lifting drum and 5 m³ (6,5 yd³) large stone hopper

The machine has a lifting drum up to 2 meters (6,5') wide, from which the stones are picked inside the machine. On the sides of the lifting drum are simple s-spike rotors that guide the stones to the center of the machine. The lifting drum uses Kivi-Pekka's strong tines, which take in stones up to 35 centimeters (13,7") in diameter. The working width of the machine is 3.3 meters. The stone tank has a large volume of 5 cubic meters (6,5 yd³). The machine is able to collect 900 kilograms (2000 lbs) of stones per minute.

The power requirement of the machine is modest. As its drawbar weight is less than 1000 kg (2200 lbs), a tractor with 60 horsepower with a single-acting hydraulic output is sufficient to pull Kivi-Pekka 3.3. Thanks to drawbar mounting the machine

will turn agilely in narrow places. The drawbars also ensures an accurate working depth. The tipping height is 210 centimeters (78"), so the stones can be easily tipped on a truck. The machine needs only one hydraulic block for tipping. The low and sturdy structure of the machine ensures safe tipping even on an uneven ground.

The Kivi-Pekka 3.3 hopper has a same kind of soil box as in larger models of Kivi-Pekka. Soil box ensures that the stones are cleaned during the tipping phase and the soil ends up in the field.

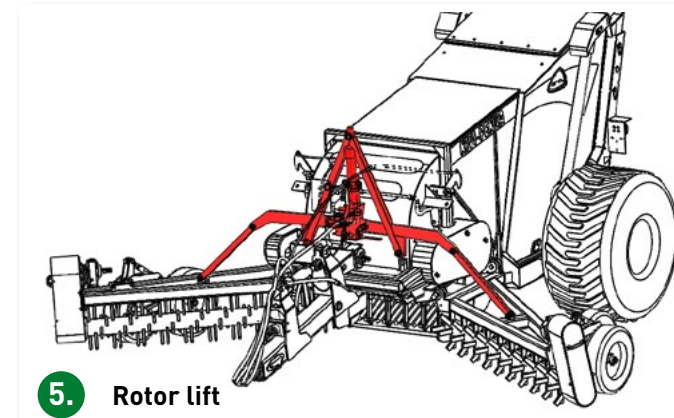
Weight 3490 kg (7700 lbs)
Working width 330 cm (10.8 ft)
Transports width 299 cm (9,8 ft)
Stone size 2,5–35 cm Ø (1–13,7 in)
Output 900 kg/min (2000 lbs/min)
Stone hopper volume 5 m³ (6,5 yd³)
Tyre size 380(15 in)/85x24
Power requirement 60 hp
Hydraulics 20 l/min (5.3 gal/min)
Running speed 1 – 6 km/h (0,6–3,7 mph)
Lifting drum tines 53 pcs
Tipping height 210 cm (78 in)



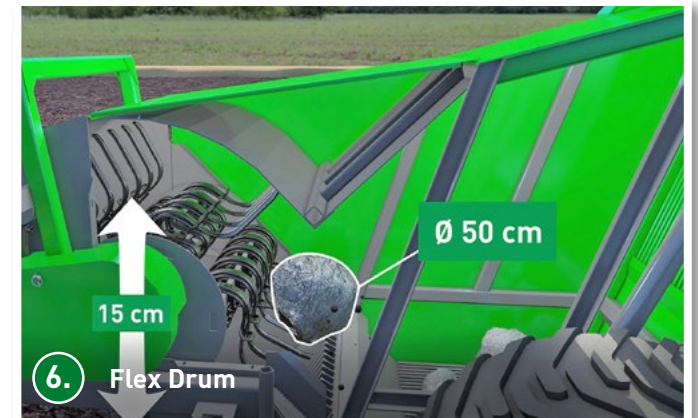
The back of the machine is grated which cleans the dirt from the rocks when the container is dumped. This allows the rocks to be used for landscaping,



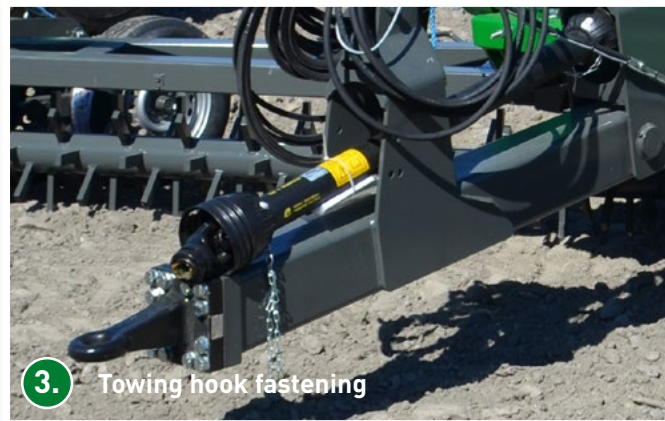
The welded sieve is made of special-alloy steel and is available with different spacings. The tines run between the sieve bars the entire length, thus keeping the sieve clean and preventing jamming of rocks.



The lifting action is achieved with a hydraulic cylinder, which raises the rakes simultaneously. Mechanical locks secure them into the top position. The operator is able to position the picker in working or transport position from the cab.



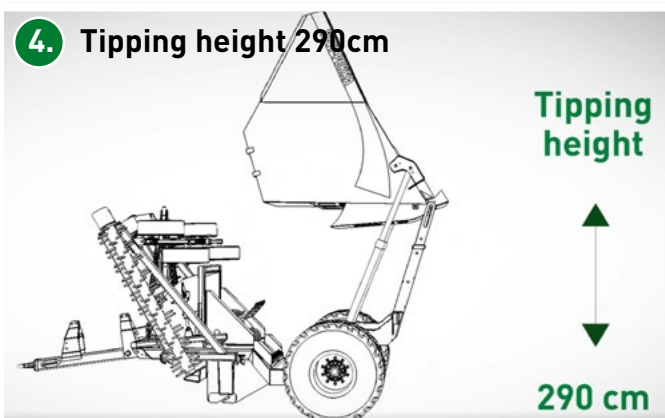
The lifting drum's power transmission is mounted along the drum frame, allowing the frame and the entire lifting drum to yield upwards, which makes it possible to lift stones 50 cm in diameter.



The stone picker has Scharmuller's towing eye as standard. It is possible to install ball coupling as accessory.



When operated in dusty conditions, the rotation guard monitors the operation of the rotors, the lifting drum and the main drive PTO shaft with sensors. An auditory alarm in the tractor cab alerts the operator if any of these stops turning.



Tipping height is 290 cm (115") so emptying the stone container to larger trailers is easy. The lifting action is achieved with a hydraulic cylinder, which raises the rakes simultaneously. Mechanical locks secure them into the top position. The operator is able to position the picker in working or transport position from the cab.

STANDARD ACCESSORIES:

- Soil container
- Sieve (in cultivation direction)
- Tyres 560 (22")/60x22.5
- Bogie tyre size 560 (22")/60x22.5, standard only in Kivi-Pekka 7 model
- Walking tandems on rakes for Kivi-Pekka 5, 6 and 7 meter models
- Tipping height 290 cm (115")
- Hydraulic working depth adjustment
- Strong tines and auxiliary tines 12x45 (0,47"x1,77") mm
- Towing hook fastening
- All PTO shafts

OPTIONAL ACCESSORIES:

- Rotor lift
- Flex Drum
- Bogie 560(22")/60-22.5
- Rotation guard
- Extra-strong tines 13x50 (1/2"x2")
- Pneumatic brakes
- 1-circuit hydraulic brakes
- Ball coupling
- Mud guards



All tine sizes give way sideways to prevent blockages. No backwards rotation is hence required. The 13x50(1/2"x2") Flex Drum tine is particularly durable and contributes to extended maintenance intervals. All tines are fitted with auxiliary springs and suspended with rubber buffers.

KIVI-PEKKA STONE PICKERS

	Kivi-Pekka 3,3	Kivi-Pekka 4	Kivi-Pekka 5	Kivi-Pekka 6	Kivi-Pekka 7
Working width, cm(lb)	330	400	500	600	700
Weight, kg(lb)	3500	4300	5300	5400	6540
Stone size, cm(ft) Ø	2,5-35	2,5-35	2,5-35 (Flex Drumilla 50)	2,5-35 (Flex Drumilla 50)	2,5-35 (Flex Drumilla 50)
Output, kg/min (lb)	900	700	1000	1200	1400
Stone hopper volume, m³(yards)	5	3	3	3	5
Tire size	380/85x24	560/60x22.5	560/60x22.5	560/60x22.5	560/60x22.5 bogie
Rotor support wheels		195 x 14 bogie	195 x 14 bogie	195 x 14 bogie	195 x 14 bogie
Power requirement, hp	60	70	80	80	100
Oil demand, l(gal)/min	20	20	20	20	20
Running speed, km/h(mph)	1-6	1-6	1-6	1-6	1-6
Lifting drum tines, pcs	53	18	28	28	33

STANDARD ACCESSORIES:

- Soil container
- Trailer coupling
- Tyres 560(20")/60-22.5
- All PTO shafts
- Hydraulic working depth adjustment
- Sieve (in cultivation direction)
- Walking tandems on rakes for Kivi-Pekka 5, 6 and 7 meter models
- Tool and spare parts box
- Tipping height 290 cm (115")

OPTIONAL ACCESSORIES:

- Rotation guard
- Rotor lift
- Bogie 500/55-20
- Bogie 500/50-17
- 710/45-22.5
- 700/50R26.5
- Extra-strong tines 13x50 (1/2"x2")
- Straight belts for lifting drum transmission
- Walking tandems on rakes for Kivi-Pekka 4 model





LIVAKKA PRO SLURRY TANKERS

Pro 2-axle 14, 16,5 and 18 m³, Pro 3-axle 20, 23 and 25 m³

Livakka has continuously developed its products in order to meet the ever-changing trends and requirements of the agricultural sector. Decades of know-how in slurry handling ensures high-quality, long-lasting products, and has established Livakka as a leading farming machinery brand. Our latest development work allows us to offer our customers an entirely updated slurry tanker, with even better features.

A FINNISH PRODUCT DESIGNED TO LAST

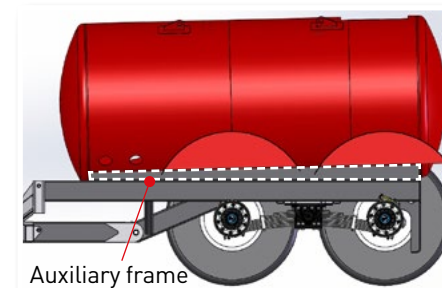
The chassis of the Livakka slurry tanker consists of a 150x250x8 double-wall tubular steel frame and an equally robust drawbar. The narrow drawbar, steered and suspended bogie, and short overall length make tight radius turns possible and allow for easy handling both in the field and on the road. With an optional accessories, crab steering, the tractor and slurry tanker can travel along different tracks in the field, thus considerably reducing soil poaching.

The tank is 2000 mm in diameter and made of 6 mm plate with seams welded on both sides. The round structure makes the tank strong, fully emptiable and easy to clean, as there are no extra edges or corners to collect dirt and slurry. Compartment plate and baffle plates in the front section of the tank provide extra reinforcement and restrain slurry movement.

Sufficient drawbar weight is ensured with a weight transfer system: the front section of the tank is compartmentalised and does not receive any discharge air until the rear section has been emptied. Tank is equipped with its own auxiliary frame. The angle form of the auxiliary frame tilts the tank forward to ensure that all slurry runs into the spreader pump.

There are no serviceable parts inside the tank – a feature that adds to user safety by eliminating all maintenance-related works requiring entry. Components and electrical and hydraulic lines run underneath the tank, enhancing user convenience as well as ease of cleaning and maintenance.

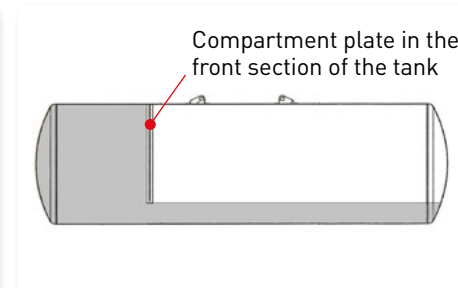
The high-quality surface treatment provides the finishing touch to the tanker's appearance and extends its service life. All surfaces to be painted are steel shot blasted to ensure proper paint adhesion. The interior of the tank is given an epoxy coating to protect against corrosion caused by slurry. Exterior surfaces are given a polyurethane topcoat, which offers high UV-resistance and allows the tankers to retain their trademark red colour, with no fading. For those who value a more personalised look, we offer special colours.



Tank equipped with its own auxiliary frame. The angle form of the auxiliary frame tilts the tank forward to ensure that all slurry runs into the spreader pump.



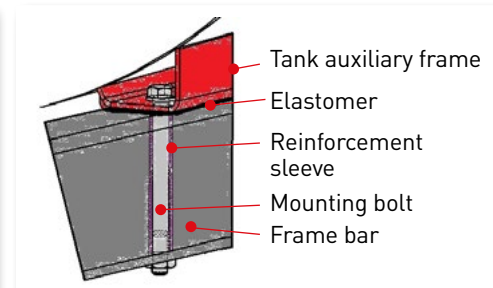
The slurry tanker chassis consists of a robust tubular steel frame and heavy-duty bogie. Electrical and hydraulic components are well protected underneath the tank.



The tank comes standard with a weight transfer system, which ensures proper balance: the front section of the tank is compartmentalised and does not receive any discharge air until the rear section has been emptied.



The slurry tanker comes with a mounting plate for a lift.



The tank is mounted to the chassis by bolting the auxiliary frame directly to it. A reinforcing sleeve runs through the frame bar. An elastomer bumper is placed between the auxiliary frame and frame bar to make a flexible structure.



2-axled: brakes on all axles, friction steering on the rear axle. Premium steered slurry tankers come standard with force steering.



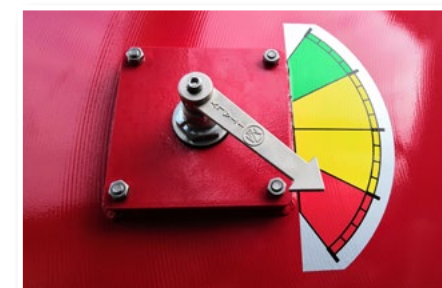
3-axled: brakes on all axles, friction steering on the front and rear axle. Premium steered slurry tankers come standard with force steering.



Efficient PTO-driven spreader pump and internal tank mixing as well as manual slurry volume adjustment.



Curved mudguards, work platforms and service steps.



Flange-mounted stainless steel slurry level indicator.



Service hatches (2).



LED tail lights, LED 'wide load' lights front and rear, reflectors and 'slowmoving vehicle' warning triangle.



LIVAKKA LIGHT SLURRY TANKERS

Light 1-axle 10 and 12 , Light 2-axle 14 , 16,5, 18 and 20 m³

The Livakka Light 1- and 2-axle slurry tankers were designed to replace the standard Livakka pendulum bogie model. The new Light "farmer line" slurry tankers offer state-of-the-art slurry tanker features in both standard and optional equipment.

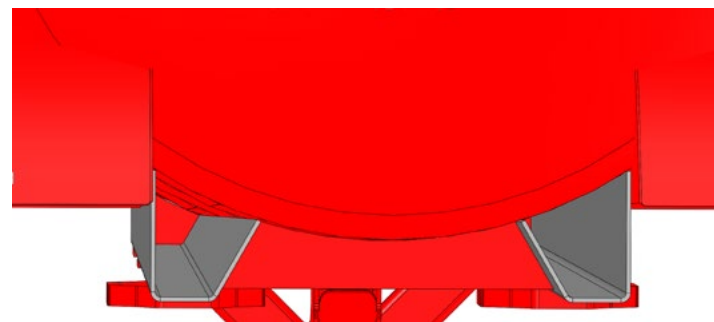
The Light slurry tankers were designed with a new frame construction to reduce the total weight of the tanker, thus helping to protect the field. However, this lightness in no way compromises the tanker's durability. A formed, high-profile U-profile is used as the frame member. The U-profile wall thickness is 10 mm and it is welded to the tank with a uniform seam. The drawbar is made of 150x250x8 tubular steel.

The axles are also from the familiar Livakka 3-axle model. The low total weight, axle structure and short overall length make the slurry tanker nimble, but stable in the field and on the road.

The tank is 2000 mm in diameter and made of 6 mm plate, with seams welded on both sides. The round structure of the tank makes it strong, fully emptiable and easy to clean, as there are no extra edges or corners to collect dirt and slurry. There are baffle plates inside the tank to restrain slurry movement.

There is nothing in the tank that would require entering it for maintenance. We wanted to take this feature into consideration in stressing user safety.

The high-quality surface treatment provides the finishing touch to the tanker's appearance, but it also extends its service life. All surfaces to be painted are steel shot blasted to ensure proper paint adhesion. The interior of the tank is given an epoxy coating to protect against corrosion caused by slurry. Exterior surfaces are given a polyurethane topcoat, which offers high UV-resistance. This allows out slurry tankers to retain their trademark red colour, with no fading. Because our customers appreciate a carefully finished appearance that meets their individual specifications, we also offer special colours.



Light trolley chassis



Light 1- axle 10 m³ and 12 m³

- The LIGHT 1-axle slurry tanker is an excellent choice for a surface spreader or water tanker. Available as an optional accessory, the Easy Control hydraulics control package also allows for the mounting of a pump crane and disc injector.
- Tank sizes: 10 and 12 m³
- Non-turning, brake-equipped axle, which is flange-mounted to the frame
- Standard tyre size 850/50R30.5



Light 2-axle 14 m³, 16,5 m³, 18 m³ and 20 m³

- The LIGHT 2-axle slurry tanker is also suitable for use in contract work thanks to its wide variety of optional accessories. Easy Control, Premium and Pilot controls are available for this slurry tanker.
- Tank sizes: 14, 16.5, 18 and 20 m³
- The weight transfer system (standard) ensures a sufficient drawbar weight. The front section of the tank is compartmentalised and does not receive any discharge air until the rear section has been emptied.
- The rear is fitted for mounting a disc injector
- Non-turning, brake-equipped front axle and friction steered, braked rear axle, leaf springs
- Standard tyre size 710/55R34

LIGHT SLURRY TANKER CONTAINS A LARGE AMOUNT OF STANDARD EQUIPMENT:

- All axles brake-equipped
- Efficient PTO-driven spreader pump and internal tank mixing as well as manual slurry volume adjustment
- Lift arm-ready
- Flange-mounted stainless steel slurry level indicator
- Curved mudguards and work platforms
- 2 service hatches
- Discharge air valves
- Service steps
- LED rear and 'wide load' lights, reflectors and 'slow-moving vehicle' warning triangle
- Scharmüller height adjustable hitch
- Quantity indicator





Front-mounted pump crane 6"



Front-mounted pump crane 6"



Centre-mounted pump crane 8"



Hydraulic fill hatch



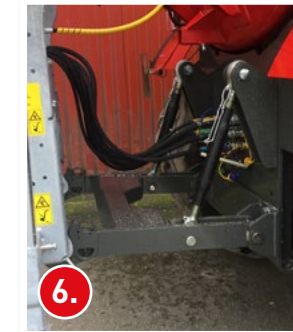
4-point lift arm



Transfer pumping equipment



Bottom fill with foam connection.
6" pipes



Bomech-lift arm



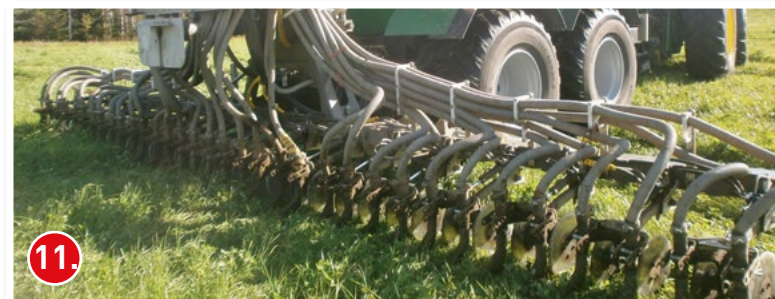
Super surface
spreader



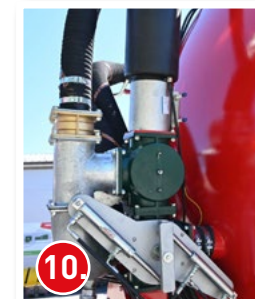
Bomech -disc injector



Ground guides



LHSD single-disc injector



Quantity adjustment
automation



LHDD hydraulic double disc injectors



PTO shaft



Scharmüller ball hitch



Hydraulic discharge can be fitted in place of the articulated shaft driven pump, either as an initial or retrospective



The hydraulic drawbar suspension alleviates the forces exerted on the tractor hitch. Drawbar suspension comes standard on 3-axle slurry tankers.



With crab steering, the tractor and slurry tanker can travel along different tracks in the field, thus considerably reducing soil poaching.



Toolbox



Centralised greasing system for slurry tanker, pump crane and injector



LED-lisätyövaloja voidaan asentaa lietevaunuun 4 kpl normaalien työvalojen lisäksi.



The slurry tanker can be fitted with a camera, whereby one camera is situated at the rear filming the blind area of the slurry tanker, and the other is installed on the crane so that, for example, the lowering of the pump into a narrow well is safer. The images from the cameras can be monitored on a display on the Premium controller located in the tractor.



Hydraulic suspension evenly distributes the weight of the slurry tanker to all wheels, so that pulling of the tanker is very stable, even on rough terrain.



LIVAKKA PUMP CRANES

Front-, side- and centre-mounted pump crane

FAST AND CLEAN LIVAKKA PUMP CRANES

Filling a tanker equipped with a pump crane is easy and fast – the entire process can be handled without ever leaving the tractor. The pump crane's functions are controlled either with the simple and affordable Easy Control –controller package or more comprehensive Pilot+ or Premium-controller packages.

The pump crane can be mounted on all Livakka slurry tanker models. The right model for each use can surely be found from among the three alternatives.

Our 6" front-mounted pump crane is mounted on the front of the drawbar, can also be easily retrofitted on all slurry tanker models. In addition, our 8" centre-mounted pump crane has been given a complete overhaul, with new rotation and boom functions. The boom structure has a low centre of gravity, while the telescopic arm offers user-friendly operation and a smaller footprint for transport. These features make the entire unit compact in appearance and stable when being drawn by a tractor.

Finnish-made Mäki-Reini submersible pumps, which are renowned for their quality and features, are used on the pump cranes. A special feature of our submersible pumps is a check valve, which prevents the slurry from

entering the tractor's hydraulic system in the event of a hose rupture.

All our pump crane models can be fitted with a transfer pumping function, which allows slurry to be discharged into a storage pond or similar using the pump crane.



6" FRONT-MOUNTED PUMP CRANE

- Filling on the right side of the tanker
- Hydraulic requirement: min. 60 l/200 bar
- Pump output 12.000 l/min. (with water)
- Extension 3,2 m from the ground surface down
- Carefully considered geometry
- Transport support



6" SIDE-MOUNTED PUMP CRANE

- Filling on the right side of the tanker
- Hydraulic requirement: min. 60 l/200 bar
- Pump output 12.000 l/min. (with water)
- Extra joint and LED running lights standard
- Extension 3.5 m from the ground surface down



8" CENTRE-MOUNTED PUMP CRANE

- Filling on both sides of the tanker
- Hydraulic requirement: min. 70 l/200 bar
- Pump output 20.000 l/min. (with water)
- Equipped with a telescopic arm, LED work lights
- Extension 4 m from the ground surface down



LIVAKKA ELECTRO-HYDRAULIC CONTROLS
Premium, Easy Control and Pilot+

THERE ARE THREE ALTERNATIVES OF CONTROL AVAILABLE FOR
SLURRYTANKER HYDRAULIC FUNCTIONS: Premium, Pilot+ and Easy Control.



EASY CONTROL
Easy Control -controller package is an excellent choice for slurry tankers where fewer functions are required. The functions are controlled using on/off valves and a membrane-covered button controller with five buttons. Simple, reliable and economical construction.



PILOT+
Pilot+ controller package is joystick-operated and fitted with a 4.3" screen. Pilot+ can be connected to both free-running tractors and those equipped with an LS pump. The operator can fine-tune the movements of the machine as they wish. The bogie locks automatically, and the Pilot+ can also be equipped with quantity adjustment automatics.

The most comprehensive of these and a favourite among contractors is the **PREMIUM CONTROL PACKAGE**, whose control equipment are controlled using a joystick and a clear, user-friendly 7" display. The user may select Finnish, Swedish or English as the display language. Premium includes Load Sensing (LS) hydraulics, which uses the tractor oil flow only when necessary, thus reducing oil overheating. The Premium control package also includes a high degree of automation, which makes working with a slurry tanker easier and faster. It also enhances safety.

- The fill automation stops the pump crane automatically when the slurry tanker is full.
- Turn-row automation can set the slurry tanker's 3-way valve for mixing, raise the disc injector lift and stop the distributor with the press of one button. After turning at the headland, the same functions will be restored in reverse order by pressing the button again, thus allowing spreading to resume without interruption. The spreader will also be moved into its transport position by pressing the same button when the work is finished.
- Using the display, the user can use the disc injector constant pressure automation to adjust the disc tillage depth, with an adjustment interval of 25 – 80 bar.
- Slurry quantity adjustment automation is used to precisely control the desired amount of slurry to be applied on the field (t/ha), regardless of variations in running speed. The flow gauge measures the slurry flow rate in real time, regardless of the slurry quality.
- Bogie locking automation makes road transports safe, as the bogie locks automatically when the speed rises above a set limit. The locking is also automatically released when the speed falls below the set limit. When reversing, the automation steers the bogie.
- The running and spreading data collection function conveniently provides information on the amount of slurry spread, hours worked and kilometres run, for invoicing.



QUANTITY ADJUSTMENT AUTOMATION
Volume control automation is used to precisely control the desired amount of slurry to be applied on the field (t/ha), regardless of variations in running speed. The flow gauge measures the slurry flow rate in real time, regardless of the slurry quality. Calibration takes place automatically with the first load.

Quantity adjustment has been realised with a high-quality Styromatic flow meter, which also recognises the quality of the slurry. In this way, the quantity adjustment remains constant regardless of the slurry quality. The adjustment does not need to be recalibrated for different slurries – effortless and easy!

Quantity adjustment automation can be retrofitted on older slurry tanker models. Quantity adjustment automation is available as an optional accessory for Easy Control and Pilot+ control packages. In Premium, the automation is fitted as standard.



TECHNICAL SPECIFICATIONS

	Premium	Pilot+	Easy Control
Steered bogie Pro slurry tanker	x	x	x
Light slurry tanker		x	x
Required number of tractor hydraulic blocks	1	1	3
LS(load sensing) -option	x	x	
Can-Bus controller	x		
Proportional joystick controller	x	x	
Membrane covered button controller		x	x
Display	X (option for camera display)	x	
Force steering	x		
Friction steering		x	x
Filling automation	x		
Quantity adjustment automation	x	optional	optional
Disc injector	automatic	manual/ injector pressure	manual
Turn-row automation	x		
Bogie locking automation	x	x	
Data collection	x		



LIVAKKA HYDRAULIC DOUBLE DISC INJECTOR LHDD

Working widths 6m, 8m and 9m

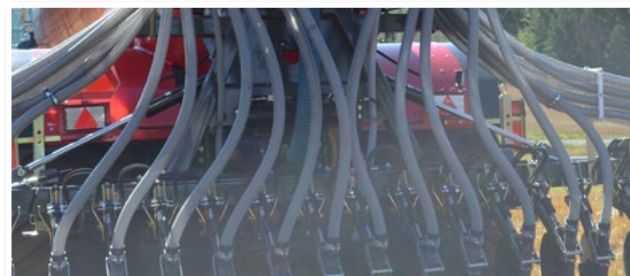
LHDD = LIVAKKA HYDRAULIC DOUBLE DISC

The LHDD disc injector is a hitch arm-mountable (CAT III 4-point) distributor, which injects slurry to a depth of up to 10 cm. The slurry is injected directly into the substrate - efficient and environmentally-friendly.

LHDD disc injectors are suitable for the spreading of slurry on turf, stubble and tilled substrates. Ground guides are available as optional accessories for the disc injector

LHDD disc injectors come with Harsø side-feed distributors fitted with offset cutters. The distributors also work effectively with viscous slurry containing a lot of hay and feed traces. The cutter blades are tempered and, if necessary, can be replaced, thus ensuring reliable, trouble-free operation for years of service. The coulter hoses are 50 mm in diameter, which allows for the injection of a large amount of slurry.

The disc injector has a three-section construction. The side sections are raised by cylinders and automatically locked with cylinder-operated latches. The disc injector offers ample ground clearance for transport. This allows for the use of a hitch arm with wide travel and hydraulic coulter suspension. The 4-point hitch arm maintains constant pressure on the coulters.



- Double disc construction – the discs make a V-shaped cut
- Makes an amply sized cut in the soil to allow for fast absorption
- Coulter spacing 27 cm
- Disc diameter 40.5 cm – discs turn easily and are not prone to pulling up stones
- Sealed, lubricated bearings
- Hydraulic suspension on each coulter ensures that they are evenly pressured and follow the contours of the terrain very closely.
- Each coulter has a travel of approximately 30 cm, thus allowing it to pass easily over even large obstacles
- Coulters can turn 30 degrees independently – curved runs will not tear up the ground
- Optional hose lock function
- Nozzles between the coulters precisely direct the slurry into the open furrow without clogging
- A surface spreader can also be mounted on the disc injector
- LED lights and a reflector triangle come standard
- Harsø vertical distributors fitted with offset cutters. The distributors also work effectively with viscous slurry containing a lot of hay and feed traces. The cutter blades are tempered and, if necessary, can be replaced, thus ensuring reliable, trouble-free operation for years of service.



LIVAKKA HYDRAULIC SINGLE DISK INJECTOR

Working widths 6m, 8m and 9m

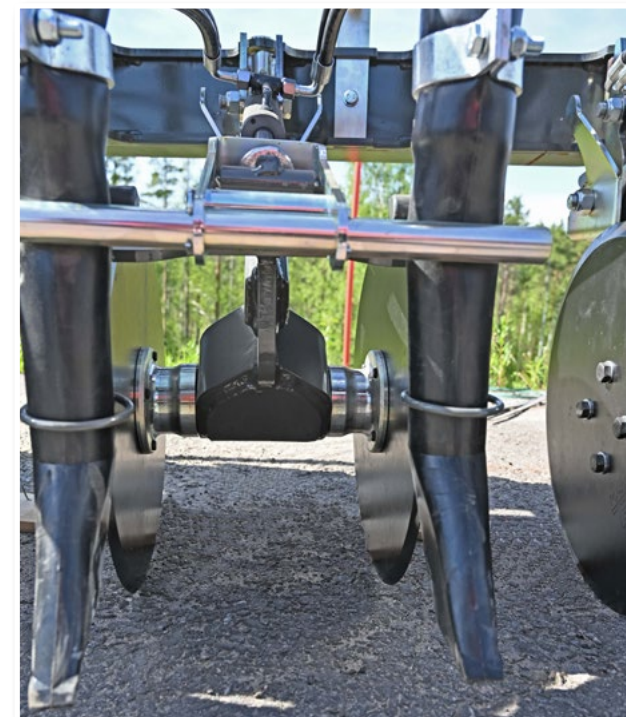
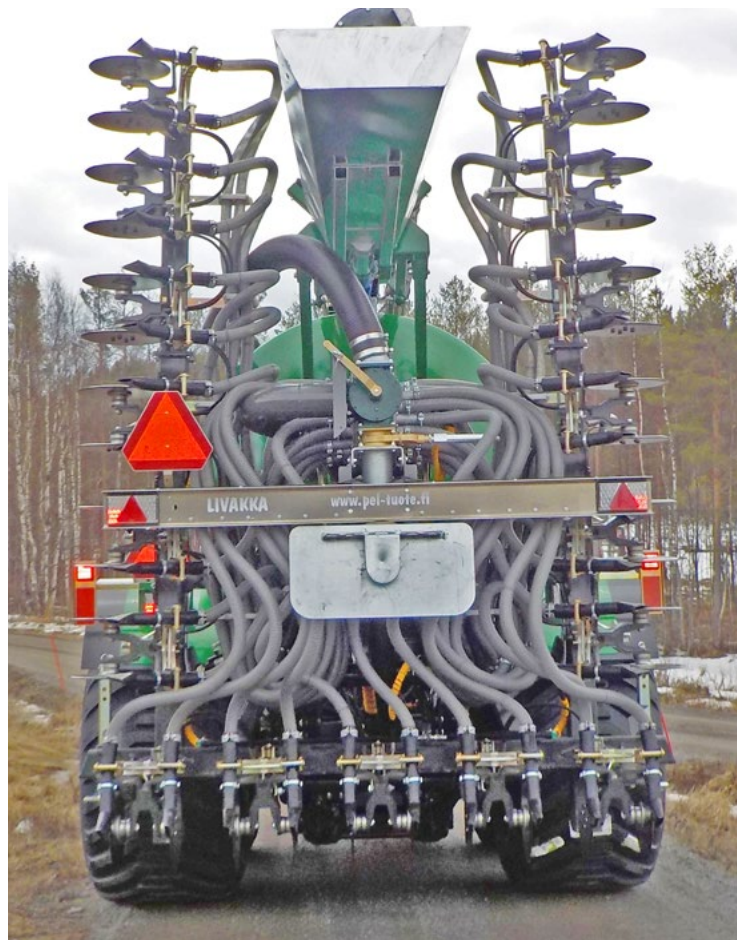
LHSD = LIVAKKA HYDRAULIC SINGLE DISC

LHSD injector is a hitch arm-mountable (CAT III 4-point) distributor, which injects slurry to a depth of up to 10 cm. The slurry is injected directly into the substrate in an efficient and environmentally friendly way.

LHSD disc injectors are suitable for the spreading of slurry on turf, stubble and tilled substrates.

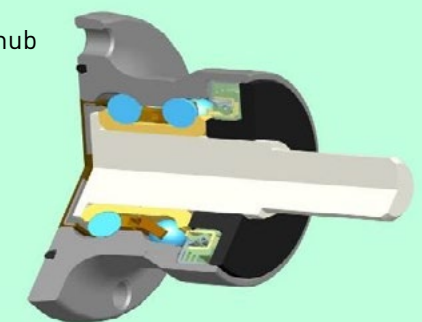
LHSD injectors come with Harsø vertical distributors fitted with offset cutters. The distributors also work effectively with viscous slurry containing a lot of hay and feed traces. The cutter blades are tempered and, if necessary, can be replaced, thus ensuring reliable, trouble-free operation for years of service. The coulter hoses are 50 mm in diameter, which allows for the injection of a large amount of slurry.

The disc injector has a three-section construction. The side sections are raised by cylinders and automatically locked with cylinder-operated latches. The injector offers ample ground clearance for transport due to the use of a hitch arm with wide travel and hydraulic coulter suspension. The 4-point hitch arm maintains constant pressure on the coulters.



- 1-disc construction
- 10 mm disk thickness makes an amply sized cut in the soil to allow for fast absorption
- Disc diameter 40.5 cm – discs turn easily and are not prone to pulling up stones
- Coulter spacing 27 cm
- Well-sealed and reliable SKF Agrihub bearings
- Hydraulic suspension on each coulter ensures that they are evenly pressured and follow the contours of the terrain very closely
- Each coulter has a travel of approximately 30 cm, thus allowing it to pass easily over even large obstacles
- Coulters can turn 30 degrees independently – curved runs will not tear up the ground
- Optional hose lock function
- Shaped nozzle directs the slurry precisely into the open furrow
- A surface spreader can also be mounted on the disc injector
- LED lights and a reflector triangle as standard

SKF Agrihub bearings





BOMECH TRAILING SHOE SYSTEMS

Bomech trailing shoe systems are well-known slurry spreaders around the world. They have gained great popularity due to their functionality and reliability. Bomech has been manufacturing and developing trailing shoes since 1990. They are suitable for grass, stubble and cultivated land.

The specially designed Bomech Trailing Shoe made from tempered steel combs the plant sideways. The slurry is then deposited directly onto the ground underneath the leaves. This technique allows the plants faster access to nutrients and avoids contamination of the leaves.

The Bomech Trailing Shoe technology with 'active contact pressure' of at least 6-10 kg per Trailing Shoe provides optimal nutrition usage to plants. Reducing leaf contamination also improves the quality of the basic feed and boosts the cattle's feed intake. Once output is complete, the parted plants come together again, thus minimising evaporation and benefitting residents and the environment alike. This is what we call environmentally friendly fertilizing. Not only that, the active ingredients in the liquid fertilizer are put to better use, which saves enormously on chemical fertilizers.

The specially designed Trailing Shoe ensures that any crop residue remains separate on the ground, and is not piled together by the machine. Our durable rubber nozzles distribute the slurry evenly and without blockages. The combination of automatic level adjustment (in the middle frame and both arms) and trailing shoes with individual suspension allow the Bomech machine to adjust to even the most difficult landscape conditions. Despite the wide working width, there is very little traction required to move the machine. Two exact distributors with stone / debris traps ensure even and equal distribution among the whole working width. The size of the slurry hoses is 40 mm. Working speed with Bomech trailing shoes can be up to 20 km / h.

BOMECH IS EUROPE'S LARGEST INJECTOR MANUFACTURER AND MODELS CAN BE FOUND FOR ALL USERS. ASK MORE FROM OUR SELLERS!

BOMECH FLEX 7.5 and 8.8 m

The Flex Trailing Shoe system is a compact and lightweight slurry spreader, equipped with one exact distributor with stone / debris trap. The system is easy to mount on any tank. The lightweight system makes it ideal for retrofitting tanks. The integrated automatic level adjustment system allows the trailing shoes, each with its own suspension, to adjust to the landscape. The Flex trailing shoes can be raised, preventing soiling of headlands, streets, and agricultural roads.

BOMECH FARMER 12 and 15 m

The Farmer Trailing Shoe system is a stable and low weight slurry spreader, and is well suited for retrofitting. The Farmer can be mounted directly onto the slurry tank, or onto any 3-/4-point linkage. Farmer has two

exact distributors with integrated cutting units and stone / debris traps, that ensure precise distribution of the slurry. Hoses are not bent during lifting or folding and are thus long-lasting and all hydraulic cylinders have end cushioning for maximum durability and performance. Farmer also has automatic level adjustment on the middle frame and on both side arms for optimal contour adjustment despite the large working width. The trailing shoes can be raised, preventing soiling of headlands, streets, and agricultural roads.

BOMECH MULTI 12, 15 and 18 m

The Multi Trailing Shoe system is a solid and professional slurry spreader. It comes with many optional features: a swing system with hydraulic suspension, 1,5m hydraulic arm extensions on each

side and automatic section control. In its standard model, the system is prepared for 3-/4-/5-point linkage, category 2 or 3. The Multi has, in addition to these standard working widths, also a professional class with a highly developed and robust constructed Trailing Shoe system in working widths of 21 and 24 metres. The massive rotary joint is specially positioned to guarantee optimal placement of the tank's feed hose to prevent kinks forming.

The top feature of this series is its hydraulic suspension system. This allows the Trailing Shoe system to swing independently of both tank movements and contour adjustment using four hydraulic suspension points on the middle frame. This system works automatically and ensures optimal contour adjustment.

LIVAKKA SLURRY TANKERS

LIGHT tankers	10 m³	12 m³	14 m³	16,5 m³	18 m³	20 m³
Width, cm	325	325	300	300	300	300
Length, cm	500	560	630	712	815	875
Tire size	850/50R30.5	850/50R30.5	710/55R34	710/55R34	710/55R34	710/55R34
Number of axles	1	1	2	2	2	2
			Steered and suspended	Steered and suspended	Steered and suspended	Steered and suspended

PRO tankers	14 m³	16,5 m³	18 m³	20 m³	23 m³	25 m³
Width, cm	300	300	300	300	300	300
Length, cm	676	758	807	906	996	1045
Tire size	710/55R34	710/55R34	710/55R34	710/55R34	710/55R34	800/60R34
Number of axles	2	2	2	3	3	3
	Steered and suspended	Steered and suspended	Steered and suspended	Steered and suspended	Steered and suspended	Steered and suspended

LIVAKKA DISK INJECTORS

	LHSD 6	LHSD 8	LHSD 9	LHDD 6	LHDD 8	LHDD 9
Mounting type	4-point lift arm CAT III	4-point lift arm CAT III	4-point lift arm CAT III	4-point lift arm CAT III	4-point lift arm CAT III	4-point lift arm CAT III
Working width, cm	600	800	900	600	800	900
Coulter type	1-disc	1-disc	1-disc	2-disc	2-disc	2-disc
Disc diameter, cm	40,5	40,5	40,5	40,5	40,5	40,5
Number of coulters	12	15	17	23	29	33
Disc spacing, cm	27	27	27	27	27	27
Suspension type	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Transport width, cm	300	300	300	300	300	300
Distributor	1 x Harsø	1 x Harsø	1 x Harsø	1 x Harsø	1 x Harsø	1 x Harsø
Slurry hose diameter, mm	50	50	50	50	50	50
Oil requirement max l/min	40	40	40	40	40	40

BOMECH TRAILING SHOE SYSTEMS

	Flex 7,5	Flex 8,8	Farmer 12	Farmer 15	Multi 15	Multi 18
Mounting type	Direct	Direct	Direct or 3-/4-point linkage	Direct or 3-/4-point linkage	Direct or 3-/4-/5-point linkage	Direct or 3-/4-/5-point linkage
Working width, cm	750	860	1200	1500	1500	1800
Coulter type	Trailing shoe	Trailing shoe	Trailing shoe	Trailing shoe	Trailing shoe	Trailing shoe
Number of outlets	34	40	48	60	62	72
Hose distance, cm	22	22	25	25	25	25
Suspension type	spring steel	spring steel	spring steel	spring steel	spring steel	spring steel
Transport width, cm	255	299	299	299	299	299
Number of distributors	1	1	2	2	2	2
Slurry hose diameter, mm	40	40	40	40	40	40
Oil requirement max l/min	40	40	40	40	40	40





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