KIVI-PEKKA

LIVAKKA

PELTUOTE

FINNISH EXPERTISE FROM THE ROCKIEST FIELDS OF FINLAND



KIVI-PEKKA STONE PICKERS

CLEAN STONES

Kivi-Pekka's soil sieve removes soil from the surface of the stones, ensuring that good-quality topsoil remains where it should: in the field. This process results in cleaner rocks that can be used in construction work or road building.

The sieving takes place at the tipping stage. The soil slides into a soil container, from where it is returned to the field.

The stone tank's back wall and bottom boast a robust mesh design. The top of the stone tank is made of a strong Hardex sheet.

EFFICIENT DRIVE SYSTEM

Kivi-Pekka is equipped with strengthened drive belts, and power is transmitted to the lifting drum via straight drive belts, contributing to a low requirement for power. The belts do double duty as an overload protection mechanism, while also absorbing the shock from the stones that come into contact with the machine.

The belts are highly resistant to wear and tear and require very little maintenance.

The running costs of the Kivi-Pekka stone picker remain low as its drivetrain does not contain any expensive parts that need replacing.

DURABILITY

Manufactured with great expertise, Kivi-Pekka stone pickers are made using steel grades and strengths selected on the basis of more than three decades of experience.

In our continuous product development, we particularly focus on improving the durability and reliability of our machines even further in order to meet the needs of the rapidly evolving and growing farming and contracting sectors.

KIVI-PEKKA STONE PICKERS

Kivi-Pekka stone pickers are manufactured in Rantasalmi, amid Finland's rockiest fields. The rocks found in our fields are mainly granite, which puts our machines to a test and offers a perfect setting for product development. Kivi-Pekka is an efficient stone picker, which can be used to remove rocks from fields before sowing to prevent damage to other farming machinery. Our machines are always tailored to meet the customer's specific needs. Thanks to its robustness and efficiency, Kivi-Pekka is suitable for contractors and for use as a shared machine. In addition to farming, it can be used in road repair and building, landscaping and building of golf courses. Kivi-Pekka stone pickers have been sold to 43 countries where they are used to collect rocks from fields covering hundreds of thousands of hectares.

COST EFFICIENCY

As the machine does not require a high towing capacity or hydraulic capacity (70 hv/20l/min.) from the tractor, the farm's larger tractors can be used for other work. Kivi-Pekka stone pickers come in three working widths: 4 m, 5 m and 6 m. The width should be selected in line with usage to ensure that the machine meets the needs of its users. Kivi-Pekka 5 and Kivi-Pekka 6 come with a wider lifting drum to provide higher efficiency for rockier soil.

STANDARD ACCESSORIES

- crowbar
- all PTO shafts
- sieve for the stone tank
- sieve for the lifting drum, as selected by the customer
- HD tines for the rotors
- Kivi-Pekka 4: 18 tines, Kivi-Pekka 5/6: 28 tines
- LED lights and slow-moving vehicle triangle
- standard tyre size 560/60R22.5
- tipping height 290 cm - adjustable

OPTIONAL ACCESSORIES

Rotation guard

When Kivi-Pekka is operated in dusty conditions, visibility may be extremely poor. The rotation guard monitors the operation of the rotor and the lifting drum for you. A signal light on the in-cab monitor lights up if the rotor or the lifting drum stops operating.

Rotor lift

You can also select a hydraulic rotor lift mechanism as an optional accessory. The lifting action is achieved with one single-acting hydraulic cylinder, which raises both rotors simultaneously. The rotors are locked into the top position with mechanical locks, which secure the rotors in this position for transport. There is no need to disconnect any PTO shafts or wires and the machine can be set up for operation and transport from the comfort of the cabin.

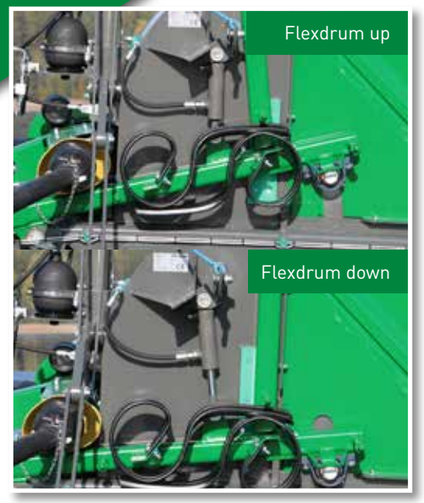
Strong tines

Kivi-Pekka can be fitted with strong lifting drum tines (12 x 45 mm), which last three times as long as the standard tines. As the tines are subjected to the highest level of wear and tear, this helps to reduce running costs to a great extent.

As a new feature, we also offer extra strong tines (13 x 50 mm), which are even more durable than the strong ones.

The tines give way sideways to prevent blockages - no rotation backwards is required

Continue to next page »



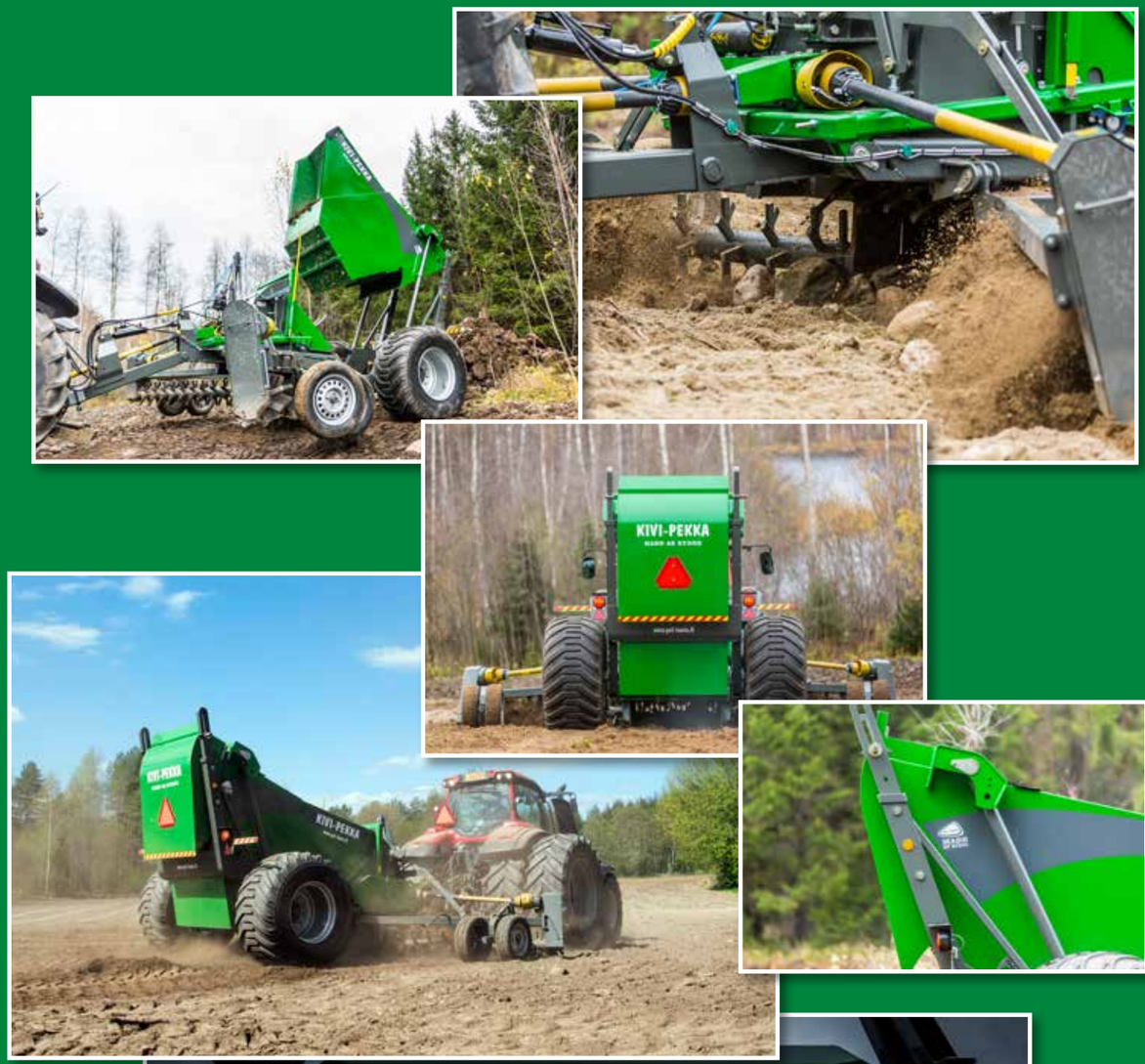
Flex Drum

Kivi-Pekka's Flex Drum allows for removal of larger rocks than the standard lifting drum. 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. 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. The Flex Drum is equipped with a suspension system to protect the sieve and tines against the effect of contact with stones, thereby extending their service life.

OTHER OPTIONAL ACCESSORIES

- Bogies 500/50R17
- Bogies 500/55R20
- 710/45R22.5
- 700/50R26.5
- Sieve options: 30, 35, 40, 50 mm
- Scharmuller K80 pick-up hitch
- Mud guards
- Rotation guard
- Hydraulic rotor lift
- Straight belts for the lifting drum transmission
- Strong lifting drum tines (12 x 45 mm)
- Extra strong lifting drum tines (13 x 50 mm)
- Double axel for the 4-metre model
- Flex Drum
- Hydraulic brakes
- Pneumatic brakes

FINNISH EXPERTISE FROM THE ROCKIEST FIELDS OF FINLAND



WATCH VIDEOS: www.pel-tuote.fi > Videos

KIVI-PEKKA

KIVI-PEKKA DISC HARROW

The KIVI-PEKKA disc harrow is suitable for tilling, light tillage and seedbed preparation.

The towable harrow can be run on fields without having to be lifted at headlands, thus significantly improving work efficiency. When operating a disc harrow coupled to the tractor lift arms, a significant percentage of the total work time is spent in headlands and corner turns, which requires the harrow to be raised off the ground.

The disc harrow is run around the perimeter of the field, because its towability allows for use on curves. As a result, its total work availability is superior to that of a comparable harrow coupled to the tractor lift arms. The disc harrow is either constantly in its working position or supported on its rubber rear packer, so that the tractor's rear wheels will not exert excessive ground pressure, as normal harrows coupled to the tractor lift arms do. This prevents soil compaction.

SIMPLE, HEAVY-DUTY FRAME

The disc harrow's heavy-duty, open and nearly uncloggable construction ensures the effective mixing of straw and plant waste into the subsoil. Fixed, solid rubber packers are mounted at the rear of the machine and the working depth is adjusted with hydraulic working discs. Working depth can be adjusted from 0-15 cm and the disc transport height is 30 cm.

KIVI-PEKKA DISC HARROW

STANDARD EQUIPMENT

- Side disc depth adjustment
- Properly designed scraper for keeping
- packers clean
- Running lights on all machines
- Hydraulic working depth adjustment
- Hydraulic drawbar
- LED front and back lights
- 'Slow moving vehicle' warning triangle
- Working depth scale
- Durable SKF bearings

TURF TILLING WITH THE VERSATILE TOWABLE DISC HARROW

KIVI-PEKKA is also suitable for use in turf tilling. Indeed, it was designed to function in all kinds of conditions. Turf tilling differs from stubble tilling in that turf tilling requires two passes and places greater demands on the machinery. If the turf is removed chemically, it will soften as its dies, thus making the tilling considerably easier. It is also possible to till growing turf. In order to make the tilling of growing turf easier, the turf should be quite short in order to keep the amount of soil mass being tilled and mixed to a minimum.

OPTIONAL ACCESSORIES

Larger diameter packer (800mm), for more effective operation in wet conditions.

Hydraulic front planer with its own hydraulic cylinder. Front planer is fitted with 80 x 10 springs, which include 150 mm blade flaps. This makes contouring the field surface and levelling ploughed areas easier.

The secondary harrow works automatically together with the disc working depth adjustment, but can also be locked out of the way in its up position. The secondary harrow provides the finishing touches for a good seedbed during seedbed preparation. When tilling, the secondary harrow is used to spread straw stacks, thus making subsequent work phases easier.

A smooth disc for extremely deep tilling is also available as an optional accessory.

A sowing unit and two rows of sowing tines are also available for supplementary sowing.

KIVI-PEKKA

KIVI-PEKKA MULTICULTIVATOR

The multicultivator's two combined cultivation elements — a cultivator and disc harrow, each with its own depth adjustment — offer operational flexibility.

This makes it possible to adapt to a wide variety of conditions. The cultivator tines, which are sweep shares arranged in three rows and fitted with a stone dislodging mechanism, provide a rougher and deeper tilling result (0–20 cm).

The disc harrow unit behind it levels and refines the surface left by the cultivator. The machine can also be used as a disc harrow alone (0-15 cm). Front wheels and transport wheels always keep the multicultivator in straight alignment with the field surface and at a constant working depth, thus making the tillage base very even and preparing a finished seedbed.

The large transport wheels in the centre of the machine allow for tight turning radii, thus making the machine very agile.

Extremely well-sealed and reliable SKF bearings are used in the discs.

FEATURES

The cultivator tines, which are sweep shares arranged in three rows and fitted with a stone dislodging mechanism, perform reliably, even in demanding, rocky conditions. The sweep shares cut the entire furrow base open and their working angle can be adjusted

The discs are mounted to a separate subframe on an elastomer suspension, and their working depth can be adjusted by changing the cylinder length.

The multicultivator is supported by large, hydraulically adjustable corner wheels at the front of the machine. The wheels keep the multicultivator at a constant working depth. The sturdy construction of the multicultivator also allows the wheels to slip slightly to the side.

The large transport wheels ensure a smooth ride, both on the road and in the field. The short distance between the tow point and the transport wheel axle in the centre of the machine improves handling.

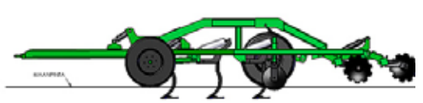
Adjustable offset discs prevent the cultivator tines from throwing soil beyond the working width, which ensures an even, clean result.

The stone dislodging mechanism protects the cultivator tines from being damaged by obstacles.

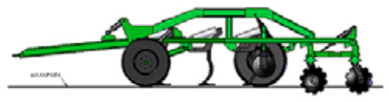
The wide sweep share blade cuts the entire width of the furrow and mixes the soil effectively.

The working depth of the cultivatorunit can be limited using stopper "clips" fitted to the cylinder shaft.

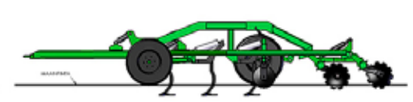
Other tine alternative for the multicultivator



Cultivator
(working depth: 0-20 cm).



Disc harrow
(working depth: 0-15 cm).



Multicultivator + disc harrow
(working depth: 0-20 cm).

KIVI-PEKKA

KIVI-PEKKA ROLLER 700

The KIVI-PEKKA ROLLER 700 is designed to withstand the strain of working on rocky fields. The specially-designed heavy-duty rubber packers do not sustain any damage when striking stones and soften impacts on the bearings. This eliminates the damages normally sustained by roller discs and bearings. The KIVI-PEKKA ROLLER 700 produces a normal, even rolling result, pressing stones at the surface back down into the ground.

The ROLLER 700 is comprised of three sections. The machine is raised and rides on the transport wheels for transport. The wings fold up hydraulically into the transport position and are pressed down in the working position with a pressure accumulator, ensuring even ground pressure over the entire working width and allowing the machine to following the surface contours of the field. The machine can be fitted with Front planer or hay tines to enhance its versatility. The roller presses the seeds into the ground, thus significantly improving their germination. The roller also presses surface stones into the ground.

The pneumatic sowing unit can be fitted with a 300-litre or 500-litre seed tank, with 8 feed outlets running to the roller. A sowing unit with an 800-litre seed tank has 16 feed outlets.

The hay tines and pneumatic sowing unit allow for effective turf restoration and supplementary sowing. It is also excellent for sowing other fine seeds. The hydraulically-operated front tines, which are arranged in two rows, carefully open the field and ensure that the seeds have excellent contact with the ground. The roller presses the seeds into the ground.

The hydraulically-operated front planer ensure the effective levelling, scraping and clump breaking of tilled soil. Ideally, the KIVI-PEKKA ROLLER 700 will level ploughed areas, thus even eliminating the need for other tilling phases before sowing. The front planer smooth out any irregularities and the roller compresses the surface to prevent the soil from drying out too quickly.

The roller hydraulics are controlled with on/off electrical blocks. No more than 2 hydraulic blocks from the tractor are needed to work.

FEATURES

Packer

The rubber-coated packer is designed to withstand impacts and work in rough conditions. This makes it possible to significantly increase working speed and efficiency in a variety of conditions as compared to conventional rollers.

Roller

The ROLLER 700 is comprised of three sections. The machine is raised and rides on the transport wheels for transport. Pressure accumulators are used to provide an even pressure on the packer and flexibility between the wings. The durability of the rubber packer allows for a higher working speed.

Sowing unit

APV sowing unit PS 300 or PS 500 (litres), with an electric fan or PS 800 with a hydraulic fan. The machine comes with sowing wheels for large and fine seeds.

Control box

The control box comes with a Finnish menu selected and a speed sensor in the roller packer for measuring speed. Seed control is done automatically according to the running speed.

Options available for front hay tines (two rows)

Front planer

KIVI-PEKKA

PRODUCT TECHNICAL SPECIFICATIONS

KIVI-PEKKA STONE PICKERS

	KIVI-PEKKA 4	KIVI-PEKKA 5	KIVI-PEKKA 6
Weight (kg)	4000	5000	5400
Working width (cm)	400	500	600
Stone size (cm)	2,5 – 30 (50)	2,5 – 30 (50)	2,5 – 30 (50)
Output	700 kg/min	1000 kg/min	1200 kg/min
Stone hopper volume	1,5–2 m^3	1,5–2 m^3	1,5–2 m^3
Tyre size			
Single tyre	560/60R22.5 710/45R22.5 700/50R26.5	560/60R22.5 710/45R22.5 700/50R26.5	560/60R22.5 710/45R22.5 700/50R26.5
With bogies	500/55R20 500/50R17	500/55R20 500/50R17	500/55R20 500/50R17
Rotor support wheels	195 x 14	195 x 14 bogie	195 x 14 bogie
Power requirement	70 hp	80 hp	80 hp
Running speed	1-6 km/h	1-6 km/h	1-6 km/h
Lifting drum	18 tines	28 tines	28 tines

Standard accessories:
- Soil container
- Towing hook
- Tyres 560/60R22.5
- All PTO shafts
- Hydraulic working depth control
- Forged sieve (in cultivation direction)
- Crowbar
- Double axles (on 5 and 6 m models)
- Tool and spare parts box
- Tipping height: 235 / 290 cm

Optional accessories:
- Rotation guard
- Hydraulic rotor lift
- Bogies 500/55R20
- Bogies 500/50R17
- 710/45R22.5
- 700/50R26.5
- Strong and extra-strong lifting drum tines
- Straight belts for lifting drum
- Double axel for the 4-metre model
- Double axle for 4-metre model

KIVI-PEKKA MULTICULTIVATOR

	MULTICULTIVATOR 325 M	MULTICULTIVATOR 425
Working width (cm)	325	425
Weight (kg)	2750	3300
Power requirement (from)	140 hp	140 hp (325) or 180 hp (425)
Number of tines	7	9
Number of discs	26	34
No. of levelling discs	2	2
Disc spacing (cm)	25	25
Work output ha/hour	2,5 - 5,0	3,2 - 6,4
No. of hydraulic blocks	3	4

Standard equipment:
- Hydraulic working depth adjustment
- Rear lights
- 'Slow-moving vehicle' warning triangle
- Front tyres with hydraulic adjustment

KIVI-PEKKA DISC HARROW

	DISC HARROW 275	DISC HARROW 350	DISC HARROW 400
Working width (cm)	275	350	400
Weight (kg)	2200	2800	3200
Weight (kg/m)	800	800	800
Power requirement	80-100 hp	100-120 hp	120-150 hp
Disc diameter (mm)	510	510	510
No. of discs	2 x 11	2 x 14	2 x 16
Disc spacing (cm)	25	25	25
Work output ha/hour	2,25-4,5	3,0-6,0	4,0-8,0
Rear wheel assembly	packer 586/800	packer 586/800	packer 586/800

Standard equipment:
- Hydraulic drawbar
- 'Slow moving vehicle' warning triangle
- Working depth scale
- Rear packer scraper
- Side disc depth adjustment
- LED rear and front lights

Optional accessories:
- 800 mm solid rubber packer
- Hydraulic front planer
- Secondary harrow
- Extra weights
- Smooth discs
- Front harrow
- Sowing unit

KIVI-PEKKA DISC HARROW 450 AND 550

	DISC HARROW 450	DISC HARROW 550
Working width (cm)	450	550
Transport width (mm)	2850	2850
Weight	3825	4675
Weight (kg/m)	850 8	50
Power requiremen	140-180	180-220
Disc diameter (cm)	51	51
Number of discs	2x18	2x22
Disc spacing (cm)	25	25
Work output (ha/h)	4,5-8,5	6-12
Rear wheel assembly	Packer 800	Packer 800

Standard equipment:
- Hydraulic working depth adjustment
- Rear wheel assembly solid rubber 800 mm packer
- LED rear and front lights
- Working depth scale
- Rear packer scraper
- Hydraulic drawbar
- Hydraulic rear wheel assembly
- Side disc depth adjustment

Optional accessories:
- Hydraulic front planer
- Secondary harrow
- Front harrow
- Sowing unit

KIVI-PEKKA ROLLER 700

	WITH HARROW	WITH FRONT PLANER
Working width cm	700	700
Power requirement	70hp	120hp
Hydraulic blocks	1x2 act.	1x2 act.
Transport width mm	2950	2950
Packer diameter cm	540	540
Number of tines	71/54kpl	0kpl
Tine spacing	100/65 (mm)	250 (mm)
Number of springs	0kpl	28kpl
Weight	3080kg	3160kg

Standard equipment:
- Rubber packers
- Hydraulic working depth adjustment
- Hydraulic press of side blocks
- Sowing unit fill level
- Speed sensor
- Running lights

Optional accessories:
- Front planer
- Front planer 8mm double tines
- Front planer 12 mm tines
- PS 300 sowing unit (300 litres, 8 hoses)
- PS 500 sowing unit (500 litres, 8 hoses)
- PS 800 sowing unit (800 litres, 16 hoses)

PELTUOTE

FINNISH EXPERTISE FROM THE ROCKIEST FIELDS OF FINLAND

FOR MORE INFORMATION, PLEASE VISIT:
www.pel-tuote.fi/en

LIVAKKA

LIVAKKA PRO SLURRY TANKERS

14 m³, 16,5 m³, 18 m³ and 20 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. This is why Livakka is a leading farming machinery brand. Our latest development work allows us to offer the customer an entirely updated slurry tanker, with even better features.

A FINNISH PRODUCT THAT IS 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 slurry tanker handling 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.

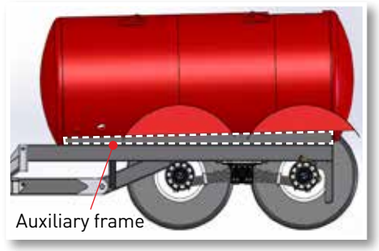
The tank comes standard with a weight transfer system, which ensures proper balance: the front section of the tank is compartmentalised and does not receive any discharge air until the rear section has been emptied. The tank has its own auxiliary frame, which is bolted to the chassis. The auxiliary frame tilts the tank forward, thus ensuring that all slurry runs into the spreader pump.

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. Components, electrical and hydraulic lines run underneath the tank enhance user convenience as well as ease of cleaning and maintenance.

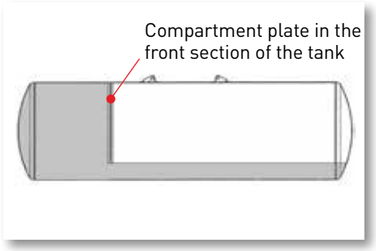
The high-quality surface treatment provides the finishing touch to the tanker's appearance, but it also extends its service life. All surfaces to be painted are steel shot blasted to ensure proper paint adhesion. The interior of the tank is given an epoxy coating to protect against corrosion caused by 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.

LIVAKKA PRO SLURRY TANKERS

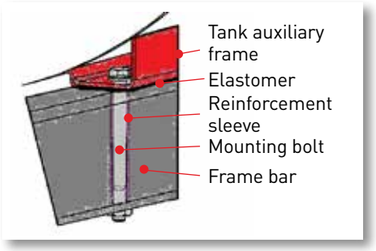
14 m³, 16,5 m³, 18 m³ and 20 m³



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



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 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.

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 slurry tanker comes with a mounting plate for a lift (optional accessory).

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 m³ and 12 m³, Light 2-axle 14 m³ and 16,5 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.

THE LIGHT SLURRY TANKER INCLUDES THE FOLLOWING STANDARD EQUIPMENT:

- Sharmuller hitch
- Parking stand
- Efficient PTO-driven spreader pump at the front of the
- tanker with a 6" discharge pipe
- Internal tank mixing
- Level indicator
- Manual slurry volume adjustment
- Baffle plates inside the tank
- Mudguards and work platform
- Service hatches (2)
- Discharge air valves
- Brakes on all axles
- Service steps
- LED 'wide load' lights front and rear, reflectors and 'slow-moving vehicle' warning triangle

LIVAKKA LIGHT SLURRY TANKERS
Light 1- axle 10 m³ and 12 m³, Light 2-axle 14 m³ and 16,5 m³

Light 1-axle 10 m³ and 12 m³

- The LIGHT 1-axle slurry tanker is an excellent choice for a surface spreader or water wagon. 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 flangemounted to the frame
- Standard tyre size 850/50R30.5

Light 2-axle 14 m³ and 16,5 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 and Pilot controls are available for this slurry tanker.
- Tank sizes: 14 and 16.5 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

Front-mounted pump crane 5”

Side-mounted pump crane 6”

Centre-mounted
pump crane 8”

Hydraulic fill hatch

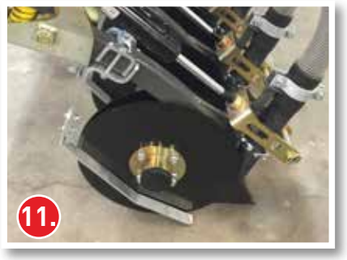
4-point lift arm

Transfer pumping equipment

Bottom fill with foam connection.
6” pipes.

Super surface
spreader

Drip hose booms



Ground guides

LHSD 1-disc injector

Towable disc injector

LHDD hydraulic double disc injectors

OTHER SLURRY TANKER ACCESSORIES

PTO shaft

Scharmüller ball hitch

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

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

Extra LED work lights

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

ELECTRO-HYDRAULIC CONTROLS

There are three alternatives of control available for slurrytanker hydraulic functions: Premium, Pilot and new Easy Control.

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.
- 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.
- 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 run and spreading data collection function conveniently provides information on the amount of slurry spread, hours worked and kilometres run for invoicing.

PILOT CONTROL PACKAGE was made to replace the standard Livakka selector box + joystick/button controller. The Pilot control package consists of one control unit, which has both membranecovered buttons and a joystick. The slurry tanker functions are controlled using the membrane-covered buttons, while the pump crane and machine functions are controlled with the joystick. Pilot works with both free-running tractors and those equipped with an LS pump

EASY CONTROL is our newest control package and an excellent choice for slurry tankers whose functions are needed less frequently. Functions are controlled using on/off valves and a membrane-covered controller with five buttons. Simple, reliable and economical.

TECHNICAL SPECIFICATIONS

	Premium	Pilot	Easy Control
Steered bogie slurry tanker	x	x	x
Light slurry tanker		x	x
Required no. of tractor hydr. blocks	1	1	3
LS option	x	x	
Can-Bus controller	x		
Proportional joy-stick controller	x	x	
Membrane-covered button controller		x	x
Display (facility for camera display)	x		
Force-steering	x		
Friction steering		x	x
Filling automation	x		
Quantity adjustment automation	x		
Disc injector	automatic	manual/ pressure adjustment	manual
Turn-row automation	x		
Bogie locking	x		
Data collection	x		

LIVAKKA PUMP CRANES

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 new Easy Control controller package or the familiar Pilot or CAN BUS controller package.

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 new 5" front-mounted pump crane, which is mounted on the front of the drawbar, can also be easily retrofitted on older slurry tanker models. In addition to this, our 8" centre-mounted pump crane has been given a complete overhaul, with new rotation and boom functions. The new boom structure has a lower centre of gravity, while the telescopic arm offers user-friendly operation and a smaller footprint for transport. These features make the entire unit more compact in appearance and more 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.

5" front-mounted pump crane

- Filling on the right side of the tanker
- Hydraulic requirement: min. 50 l/150 bar
- Pump output 5,000 l/min. (with water)
- Extension 3 m from the ground surface down
- Carefully considered geometry

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)
- Extension 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 HITCH ARMMOUNTABLE DISC INJECTOR LHDD

Working widths 6m and 8m

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. Constant pressure on the coulters

- Double disc construction – the discs make a V-shaped cut
- They make 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.
- The coulters can also turn 30 degrees independently – curved runs will not tear up the ground
- Optional hose lock function
- The 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 side-feed distributors fitted with offset cutters. The distributors also work well with highly viscous slurries containing a large amount 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 HITCH ARMMOUNTABLE DISC INJECTOR LHSD
Working widths 6m and 8m

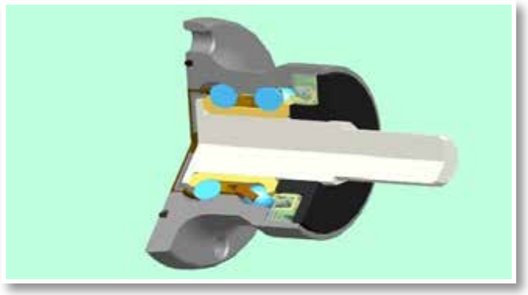
LHSD = Livakka hydraulic single disc

The LHSD 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.

LHSD 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. Constant pressure on the coulters.



- 1- disc construction
- 10 mm disck 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
- The SKF bearings used in the discs are extremely well-sealed and reliable
- 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
- The coulters can also turn 30 degrees independently – curved runs will not tear up the ground
- Optional hose lock function
- The 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 side-feed distributors fitted with offset cutters. The distributors also work well with highly viscous slurries containing a large amount 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 TOWABLE DISC INJECTOR
Working width: 8 m

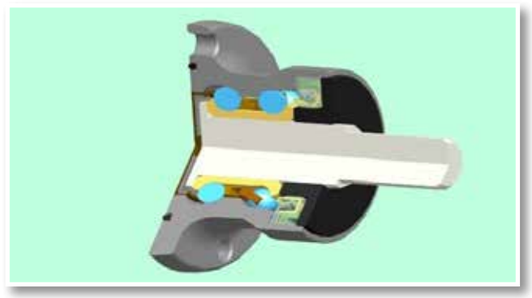
The Livakka towable disc injector offers an efficient and environmentally friendly means of applying slurry fertiliser into the soil. With a single-disc system, slurry is injected effectively and reliably in all conditions.

Thanks to its design, the disc injector can also be used with lighter-duty slurry tankers, as no separate hitch arm is required to operate the machine, nor is a separate frame needed for coupling. The machine is also easy to retrofit. The disc injector is never subjected to the weight of the slurry tanker, which greatly improves its durability. Its drawbar articulation allows it to move in line with the contours of the terrain, without coming into contact with the ground. The disc injector has a low-lying structure, which makes it stable also on a sloping terrain.

Thanks to its towable design, the disc injector has a low point load on the ground. Equipped with forced steering, the disc injector-trailer combination can be reversed normally, despite being towable.

The disc injector's functions can be controlled with a 2.7" screen. It can be connected to both free-running tractors and those equipped with an LS pump. You can also select a turn-row automation system as an optional accessory, enabling you to set the slurry tanker's 3-way valve for mixing, raise the disc injector lift and stop the distributor with the press of a button. With the system, the functions can be performed in reverse order just as easily, enabling uninterrupted operations. The spreader can also be manoeuvred into the transport position using the same button.

LIVAKKA TOWABLE DISC INJECTOR
Working width: 8 m



- Connected to a tanker with its own frame - quick and easy to detach, when necessary
- The injector has its own axle assembly - does not increase that tanker's axle weight
- The disc injector is articulated to allow lateral, horizontal and torsional movement, enabling it to follow the contours of the terrain independently of the slurry tanker
- With the single-disc system, slurry can be injected into the depth of up to 10 m - no great towing capacity is required
- The disc diameter of 455 mm ensures that the discs will turn easily also in challenging conditions, without bringing stones to the surface
- Reliable operations on turf, stubble and tilled soiled
- Slurry is injected into a furrow opened by the discs via a rubber injection cone
- The discs' SFK bearings are extremely well-sealed and reliable
- Also in use in rotary tillers, the discs' elastomer suspension system is reliable and can withstand heavy use
- Levelling plates mounted behind the discs flatten any mounds (such as molehills) at the injection stage
- The plates level the surface of ploughed areas
- Slurry is mixed with tilled soil more effectively, enabling it to work faster, and less nitrogen is lost to evaporation
- The towable disc injector is equipped with two Harsø distributors and 50 mm hoses to ensure an improved slurry flow capacity
- The hoses are as short as possible without unnecessary connections to minimise the risk of clogging and to make them quick to drain
- When necessary, the machine can be operated at half the working width

DRIP HOSE BOOMS

Drip hose booms are a cost-effective way to spread slurry in soil, due to their large working width. There is minimal soiling of plants, as the slurry is guided through the hoses directly down to the plant roots.

When using a drip hose boom to spread slurry, there is less nitrogen evaporation and almost no odour compared to surface spreading. Drip hose booms come in models with a 12 or 16 m working width. The crane booms are equipped with a safety suspension and all frame parts are galvanised to ensure a long service life for the drip hose boom.

The hoses are raised up during transport. The drip hose booms use Harsø side-mounted distributors 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 Harsø distributors have a high slurry penetration capacity, but little need for hydraulics (max. 40 l/min.), thus placing no restrictions on the tractor equipment used. The hose diameter is 50 mm, which ensures adequate slurry fluidity and significantly reduces the re diameter is 50 mm, which ensures adequate slurry fluidity and significantly reduces the risk of hose clogs

12 m and 16 m drip hose boom with retractable hoses

- Working width: 12m or 16m
- Transport width 3.17m
- Hoses hydraulically retractable for transport – drip-free model

LIVAKKA SLURRY PUMPS/MIXERS

TR80 and TR Multi models

TR80 – FOR POWERFUL SLURRY TANK MIXING AND HIGH-SPEED PUMPING.

TR MULTI – THE NUMBER ONE CHOICE FOR TANKS WITH VARYING DEPTHS

- Strong and highly durable, heavy-duty chassis.
- Galvanised slurry pipe ensures an extremely long service life
- Mixing and filling position controlled by a manual, lever-actuated 3-way valve
- On TR80 models, the pump filling position is perpendicular to the surface plane of the slurry.
- Thanks to the double gearbox, the operating position of the pump/mixer is stepless and can be used when the tank edge edge is no more than 100 cm from the surface of the ground
- The TR80 is available in the following lengths: 300, 350 and 400 cm
- The TR Multi is available in the following lengths: 350 and 400 cm

LIVAKKA

PRODUCT TECHNICAL SPECIFICATIONS

LIVAKKA SLURRY TANKERS 10 – 20 m³

	Light 10 m³	Light 12 m³	Light 14 m³	Light 16,5 m³	Light 18 m³	14 m³	16,5 m³	18 m³	20 m³
Width	325	325	305	305	305	305	305	305	305
Length (cm)	500	560	630	712	815	676	758	807	906
Tyre size	850/50R30.5	850/50R30.5	710/55R34	710/55R34	710/55R34	710/55R34	710/55R34	710/55R34	710/55R34
Axles (no.)	1	1	2	2	2	2	2	2	3
Steered, suspended			x	x	x	x	x	x	x

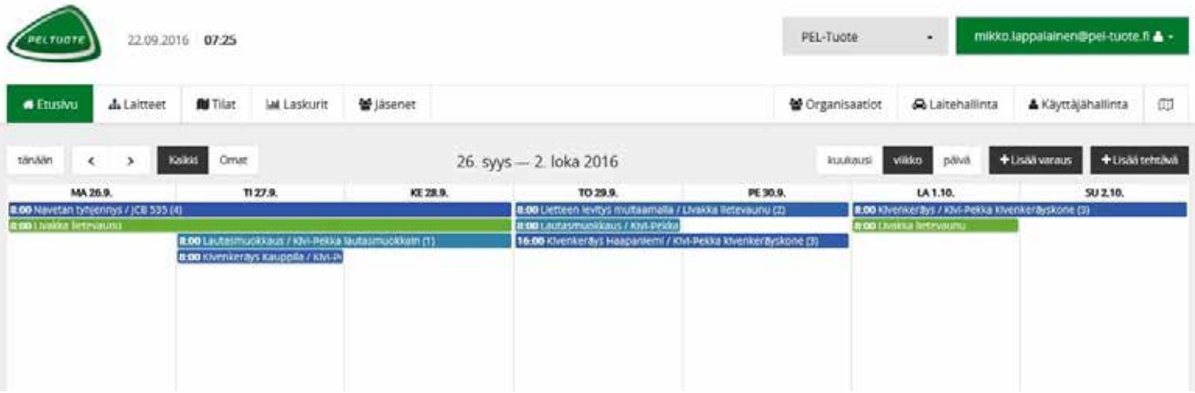
LIVAKKA DISC INJECTORS

	LHSD6	LHSD8	LHDD6	LHDD8	Towable disc injector
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
Working width (cm)	600	800	600	800	800
Coulter type	1-disc	1-disc	2-disc	2-disc	1-disc
Disc diameter (cm)	40,5	40,5	40,5	40,5	45,5
Coulters (no.)	13	15	23	29	16
Disc spacing (cm)	27	27	27	27	25,8
Suspension type	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Elastomer
Transport width (mm)	3000	3000	3000	3000	2990
Distributor	1 xHarsö	1 x Harsö	1 x Harsö	1 x Harsö	2 x Harsö
Slurry hose diameter (mm)	50	50	50	50	50
Oil requirement	40	40	40	40	40

LIVAKKA SLURRY PUMPS/MIXERS

	TR80	TR MULTI 540r / min	TR MULTI 800r/min
Power requirement	approx. 60 kW	approx. 60 kW	approx. 78 kW
Working length (cm)	300, 350 and 400	350 and 400	350 and 400
Edge max. ground clearance (cm)	40	100	100
3-way valve (size in inches)	5"	6"	6"
Max. tank size when mixing pig slurry (m)	20	25	25
Max. tank size when mixing cow slurry (m)	25	30	30
Mixing output m³ / min	10-12	10-12	12-15
Filling output m³ / min	6-8	6-8	7-10
Filling pipe (inches)	5"	6"	6"
Mixing pipe (inches)	5"	5"	5"
Lift height (m)	13	12	15
Installation port min. dimensions (cm)	80×100	90×120	90×120
Without work platform max. (cm)	100×100	100×120	100×120
Weight (kg)	430	520	520
Length (cm)	300	350	400

FOR MORE INFORMATION, PLEASE VISIT:
www.pel-tuote.fi



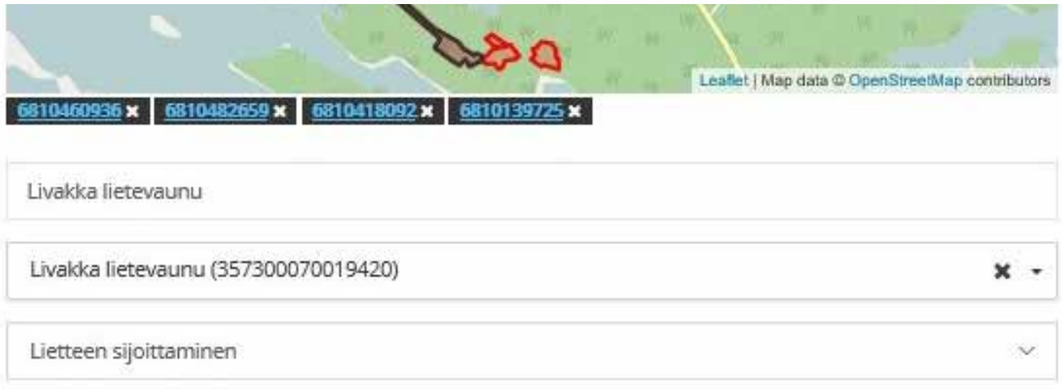
MYAGRIPLAN

MyAgriPlan is a program that can be used to enhance machine performance, make work plans, ensure regular machine maintenance and create invoices for contracts.

MyAgriPlan was designed using the same type of solution as Valtran Smart, which will further enhance system compatibility in the future. With the MyAgriPlan system, a data collection unit is placed in the work machines. The unit collects sensor and position data. This data can be used to make an individualised plan for each machine.

The farmer-user can use the system for supervising work, scheduling, work lists and inventory management. All of this planning is done in an effort to make work more efficient and economical using machines optimised for the work being performed. The contractor can use the system to indicate the position of the work site and set work times. The contractor can easily make area work plans, thus avoiding the loss of precious contracting time. The system also helps with invoicing and servicing reminders.

A common problem with shared machines has typically been that no one knows where a given machine is or for how long it has been booked. Now, each machine partner can plan their work more easily when they know how the shared machine can be used and booked on their own calendar, not to mention see the exact location of the machine. This can increase the efficiency of machine use far more than adding an extra metre of working width to it.



PEL-Tuote started out 30 years ago with the manufacture of field chopper funnels, which were made as spare parts. The first real move toward a new way of doing business came with rock pickers, which the company began to manufacture 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. Today, KIVI-PEKKA manufactures not only rock pickers, but also disc harrows, rollers and multicultivators.

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 38 countries, with approximately half of our turnover coming from exports.

PEL-Tuote Oy
Seppälänsalmentie 181
FIN-58900 Rantasalmi
FINLAND

EXPORT
Jens Köllner
jens.koellner@pel-tuote.fi
Tel. +358 40 568 8115