



**LOZOVA
MACHINERY**

TILLAGE MACHINERY



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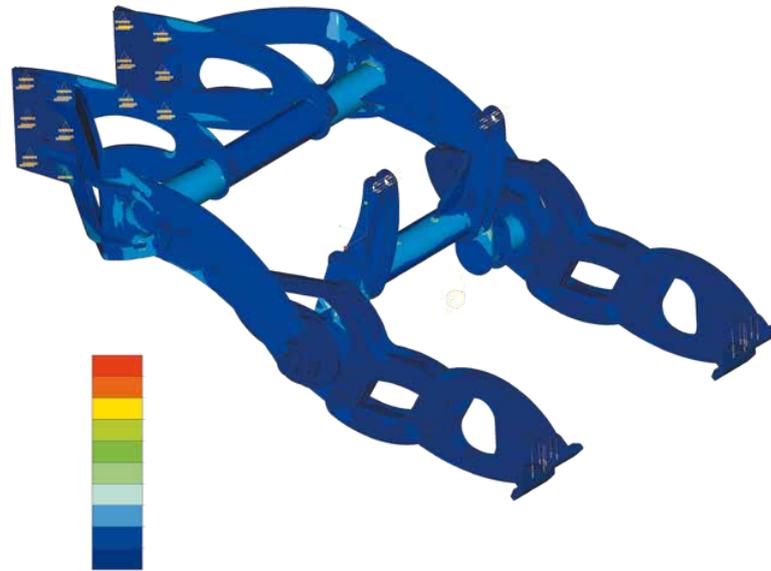
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50-YEARS EXPERIENCE IN AGRICULTURAL ENGINEERING

Engineering center LOZOVA MACHINERY combines specialists with the highest qualification in science. It is a part of Joint Engineering Center UPEC which performs mathematic simulation and complex fundamental calculations (in particular, durability calculations) of designed units.

Design bureau uses advanced software (Pro Engineer, Pro Mechanical).

Every day we improve, upgrade and simplify our machinery, enhancing reliability. New units are designed in terms of close cooperation with farmers, taking into consideration their requests.



1966



1999



2009



FOUNDATION OF PRODUCTION PLANT (LKMZ)

The biggest plant in USSR was founded with the purpose to cover needs of agricultural engineering companies.

LOZOVA MACHINERY FOUNDATION

Production of agricultural machinery was separated as new business segment.

Launch of serial production of legendary tooth harrow LIRA.

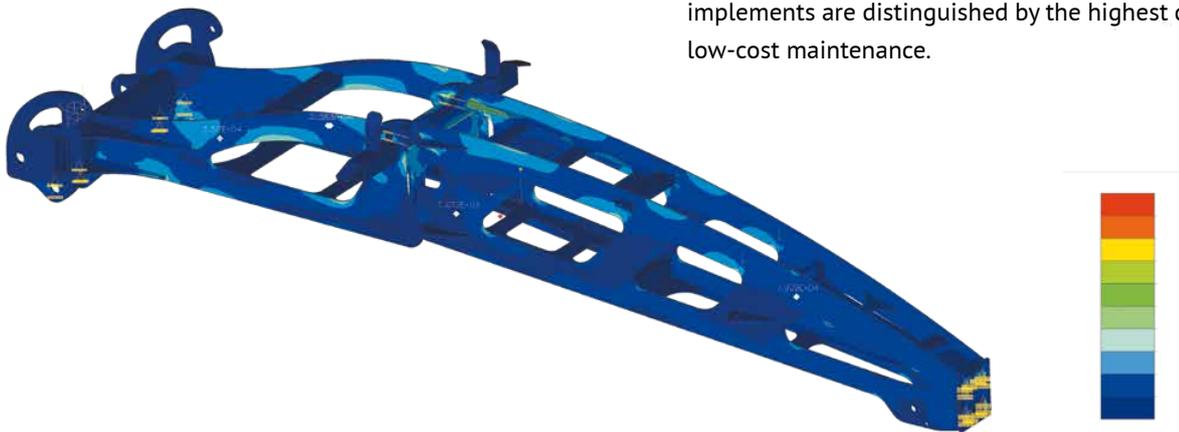
DUCAT DISC HARROW CREATION

LOZOVA MACHINERY has become one of the first manufacturers of disc harrows with spring tines in Ukraine (and among the world's first).

Our design solutions are original and patented. Before launch of serial production all units undergo several stages of testing, including bench and field tests.

We cooperate with universities and research institutes in Ukraine and worldwide. Together we achieved higher tillage quality proven by a number of independent researches and tests.

We never cut corners – all LOZOVA MACHINERY implements are distinguished by the highest quality and low-cost maintenance.



2013 - 2014



2016 - 2017



2019



LOZOVA MACHINERY — FULL-LINER

Serial production of the full range of disc harrows – from 2,5 to 16,75 m.

The second biggest disc harrow in Europe DUCAT-16 was produced.

Release of FRANC and GULDEN subsoilers, CHERVONETS seedbed cultivator.

NEW IMPLEMENTS

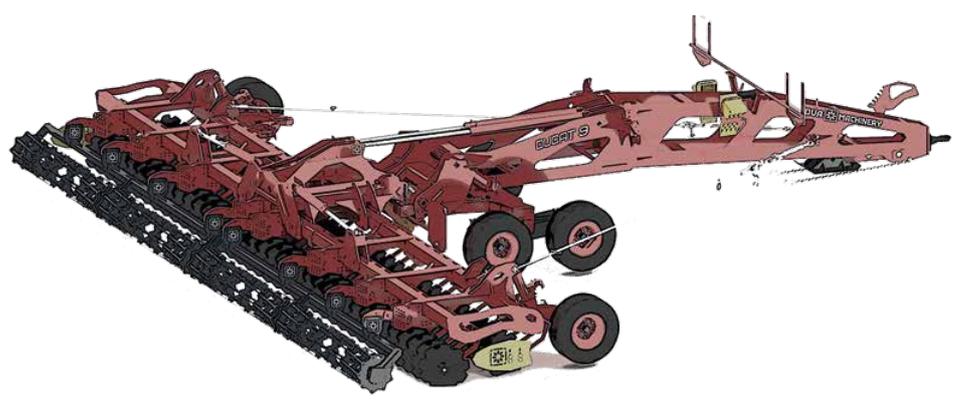
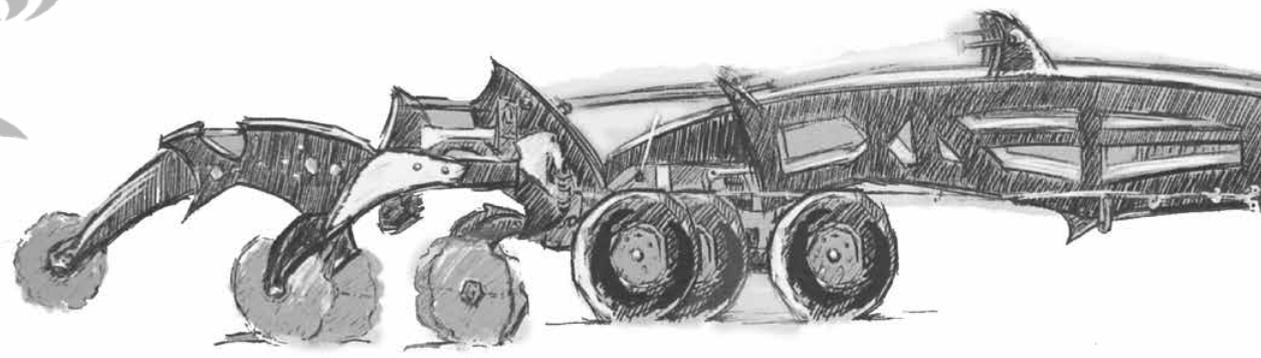
Release and launch of serial production of new implements: DUCAT GOLD, LIRA XL, LARI, DINAR.

Launch of ALBION XL trailers production.

RETYLING

LOZOVA MACHINERY changes design.

Launch of production of KELT XXL trailers and FLORIN cultivators.



LOZOVA MACHINERY
NEW STYLE



QUALITY
SPEED
EFFICIENCY



New style and design of LOZOVA MACHINERY implements were inspired by nature.

Shark, tiger and even dragons are the most adapted creatures, which get perfect shape in the course of evolution.

So we used these prototypes to create a new style of machinery.

Stubble cultivation, basic/seedbed preparation

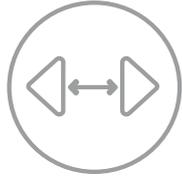


DUCAT

COMPACT DISC HARROWS



TRADITIONAL
and ORGANIC



2,5 - 16,75 m



min 80 hp



max 20 ha/h

RESULT IN ONE PASS

DUCAT disc harrow is the most suitable for stubble cultivation. It provides intensive mixing of the soil and vegetation at a depth up to 14 cm.

They are applied for:

- stubble cultivation;
- mulching;
- shallow and surface basic cultivation;
- seedbed preparation.





3D spring tine

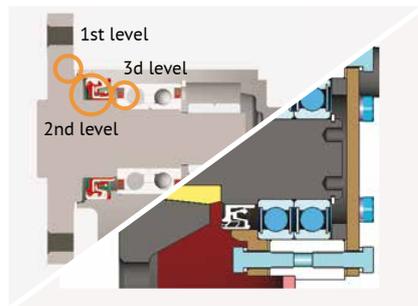
3D spring tine provides:

- reducing of the implement draught and fuel consumption by over 20%;
- uniform cultivation depth as the harrow doesn't raise when one of the discs hits an obstacle;
- disc self-cleaning which ensures efficient operation on the wet soil.



Premium class discs

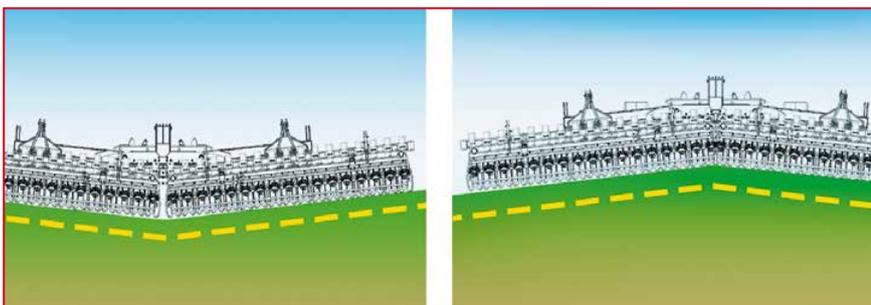
- Discs are made of high-quality hardened boron steel and have longer service life (work two times longer than analogues).
- Discs spacing of 125 mm and low frequency lateral tine vibrations provide a seedbed even by depth and without deep furrows.
- Working tools attack angle is 20°.
- Soil entry angle is 12°.



"ZERO MAINTENANCE"

A distinctive feature of LOZOVA MACHINERY equipment is the principle "ZERO MAINTENANCE", which means that the equipment does not need lubrication / re-lubrication and other types of standard maintenance throughout its entire life cycle.

Ducat is equipped with ultra-reliable HARP AGRO UNIT bearing units with three-level bearing protection. These units are installed both on the disc stands and on the roller.



High-quality contours following for perfect cultivation

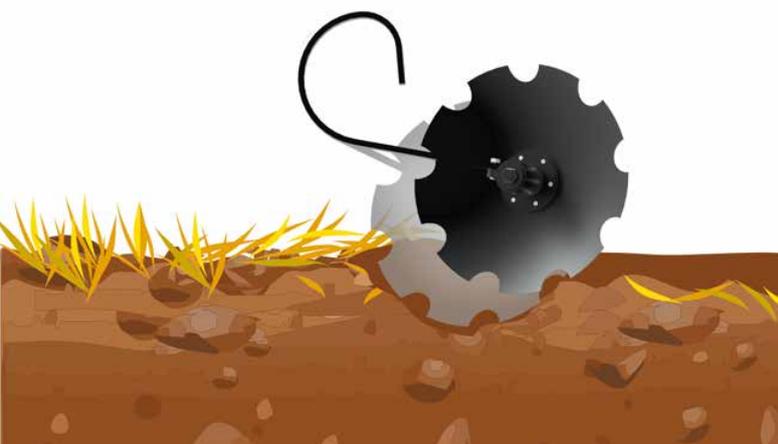
Application of the different following systems with uniform distribution of loads on the working elements allows for the efficient operation on fields with complex contours.

Design of the DUCAT provides precise depth control and good levelling.



Roller maintenance-free bearing unit

Bearing unit of the roller is maintenance-free for entire service life due to high-quality cassette sealings and HARP-AGRO fully sealed bearings. Roller axles are mounted on the cage by the rubber buffers, which additionally reduce absorbed loads of the bearing unit.



MODULES FOR APPLYING GRANULAR FERTILIZERS AND OVERSEEDING



DUCAT disc harrow can be equipped with an additional module that allows you to apply granular fertilizers, as well as use it for overseeding (for example, green manure) in one pass with the main processing.

- powerful fan with 12V drive
- infinitely variable compressor
- tanks of various capacities (120, 240, 500 l)

TECHNICAL DATA

	DUCAT-2,5	DUCAT-3	DUCAT-4	DUCAT-5	DUCAT-6	THALER-8 + 2 pcs. of DUCAT-4	NEW			
	DUCAT-2,5	DUCAT-3	DUCAT-4	DUCAT-5	DUCAT-6	THALER-8 + 2 pcs. of DUCAT-4	DUCAT-8	DUCAT-9	DUCAT-12	DUCAT-16
Working width, m	2,5	3	4	5,25	6,25	8,25	8,25	9,25	12,25	16,75
Tractor power, hp	min 80	min 100	min 130	min 150	min 170	min 250	min 250	min 300	min 350	min 450
Coupling with tractor	mounted		semi-mounted			semi-trailed	semi-trailed		semi-trailed	trailed
Basic weight, kg	1050	1400	1600	3820	4572	5305	7670	9163	10330	14725
Number of discs	20	24	32	42	50	66	66	74	98	134
Disc diameter, mm	566						566		566	
Overload protection	3D-protection						3D-protection		3D-protection	
Operating depth, cm	3–12		3–14		3–12		3–14		3–14	
Operating speed, km/h	10–17						10–17		10–17	
Efficiency, ha/h	max 3,4	max 4,1	max 5,5	max 6,7	max 7,8	max 10,5	max 10,5	max 11,8	max 15,6	max 20,1
Fuel consumption, l/ha	4,5–5,5						4,5–5,5		4,5–5,5	
Transport dimensions (length x width x height), mm	2456 x 2691 x 1450	2456 x 3000 x 2000	2456 x 4190 x 1550	5789 x 3000 x 3210	5780 x 3000 x 3751	5804 x 3000 x 3713	6832 x 3000 x 3326	7368 x 3000 x 3334	8497 x 3000 x 3636	18944 x 3960 x 4095

WIDE VARIETY OF ROLLERS

For optimal packing, DUCAT can be equipped with rollers of various types:

Cage roller



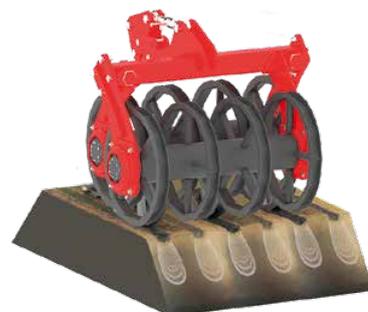
For all types of soil

Packing tooth roller



For dry soils of all types

Double U roller



For all types of soil with
big amount of crop residues

Rubber roller



For seedbed preparation

Pack ring roller



For wet soils of all types

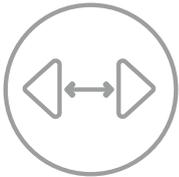


Stubble cultivation, basic/seedbed preparation



DUCAT-GOLD

HEAVY DISC HARROWS



6 - 8 m



min 300 hp



max 12 ha/h



724 mm

GOLD STANDARD OF DISC HARROWING

DUCAT GOLD is a versatile harrow which performs all necessary functions for tilling and seedbed preparation of stubbled or virgin fields in one pass.

The harrow ensures uniform mixing of the soil and plant residues to a depth of 5 to 20 cm without blocking of working tools even when there is a big amount of organic mass (including maize and sunflower).





Tines with discs

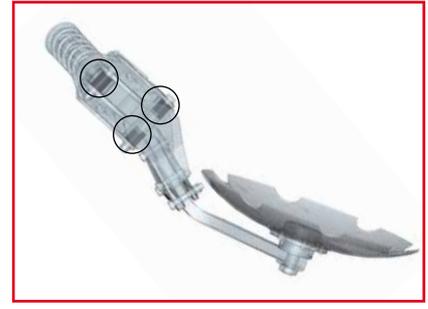
Tines are made of high quality steel and endure high loads on dry soil. Attack angle of discs is 20°, while the angle to the movement direction is 12°.

This provides rapid discs penetration into the soil and uniform tillage, as well as an optimal combination of chopping and mixing of the soil with crop residues.



Protection of tines

Double spring creates an optimal pressure on the tine, which keeps working depth when destroying remains of rough crops, and protects it from overloads



"ZERO MAINTENANCE"

DUCAT GOLD is equipped with ultra-reliable HARP AGRO UNIT bearing units with three-level bearing protection. These units are installed both on the disc stands and on the roller.

Modern plain bearings (installed at three points) are used in the design of the stands. They are used to eliminate additional lubrication points and increase the interval of work without maintenance.



Rollers

Rollers with diameter of 600 mm provide good load-bearing capacity on light soils.

Rollers are equipped with maintenance-free bearing units HARP AGRO UNIT.

Heavy roller provides an optimal compacting of loosened soil.

For simple depth setting the rollers are hydraulically regulated from a tractor cab.



Smooth run and thorough work

Heavy disc harrow is equipped with a balance drive system, which provides a smooth run during work and transportation on public roads and cross country.



Hydraulic protection

DUCAT GOLD has a hydraulic lock for safe transportation of folded machine, which is activated by the tractor's hydraulic system.

MODULES FOR APPLYING GRANULAR FERTILIZERS AND OVERSEEDING



The DUCAT GOLD heavy disc harrow can be equipped with an additional module that allows you to apply granular fertilizers, as well as use for overseeding (for example, green manure) in one pass with the main processing.

- powerful fan with 12V drive
- infinitely variable compressor
- tanks of various capacities (120, 240, 500 l)

TECHNICAL DATA

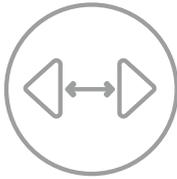
	DUCAT GOLD-6	DUCAT GOLD-8
Working width, m	6	8
Tractor power, hp	min 300	min 400
Coupling with tractor	semi-trailed	semi-trailed
Weight, kg	10 705	13 459
Number of discs, pcs.	38	50
Disc with big diameter, mm	724	724
Load per disc, kg	280	270
Heavy tine	spring block	spring block
Operation depth, cm	5-20	5 - 20
Operation speed, km/h	10-17	10-17
Efficiency, ha/h	max 9	max 12
Fuel consumption, l/ha	max 9	max 9
Transport dimensions (length x width x height), mm	8151 x 3000 x 4000	7495 x 3970 x 4000

Subsoiling



FRANC GULDEN

SUBSOILERS



2,5 - 4 m



min 160 hp



max 3,6 ha/h

THE BEST ALTERNATIVE TO PLOWING

FRANC and GULDEN subsoilers are designed for solid one- and two-level nonmoldboard cultivation instead of fall and spring tillage, chiselling on the slopes and leas, post-harvest loosening and seedbed preparation of stubble and mulch backgrounds, eroded soils, as well as for cultivation of the long-fallow and forage lands.

The implements perform chisel tillage, leaving on the surface 30-60% of crop residues, which solves the problem of soil erosion, maintaining the organic composition of the soil and ensuring its long-term fertility.

... AND SOIL BREATHEES!





Design characteristics of working tools

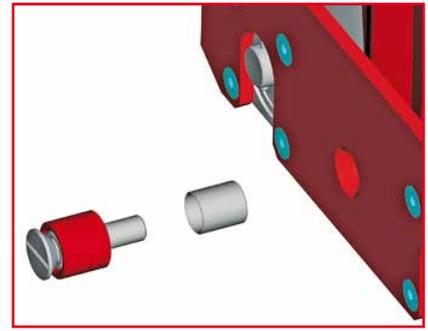
Quick-change front point and shim protect the tine from wear, and the geometric configuration allows deeper penetrating of the working tool into firm soil.

High-strength straight tine subsoils at right angle, preventing lateral displacement of the soil, and requires lower pulling force compared to "paraplau" tines.



Firm soil wave blasting effect

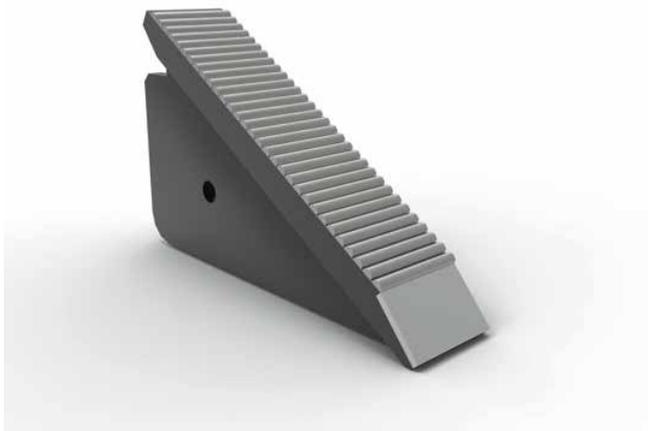
Side wings, fixed with bolts on the tine, allow subsoiling between the tines, providing maximum moisture penetration into lower layers, as well as to improve moisture conservation and air drainage. Application of the side wings at high speed causes the "firm soil wave blasting" effect.



"ZERO MAINTENANCE"

Bimetallic plain bearings are installed in the roller balancer and in the axle of the tool depth adjustment mechanism. They ensure reliable operation for a long time. "Breaking" of the pumping points is excluded. Virtually no lubrication point is present throughout the implement.

HARD-SHELL — share points for franc and gulden subsoilers



- Quick-change point made of boron steel with built-in wings for GULDEN. Shares with wings subsoil and loosen the top soil very well.
- Hardness is more than 88 HRC.

THREE TIMES LONGER WORK!

- The main feature of HARD-SHELL quick-change hardmetal point is long term durability. HARD-SHELL significantly reduces maintenance costs and provides high quality work at constant depth. The point is welded and can be mounted both on FRANC and GULDEN.
- Hardness is more than 88 HRC.





Protected frame

Shear bolt is applied for protection against exceeding loads, excluding the possible damage to frame.

FRANC-3sp is equipped with mechanical combined compression spring and separation bolt to prevent damage of frame.



Advantages of the straight tine

Subsoiler's tines penetrate into the soil at right angle, move the plough-pan, break it with additional wings, cut weed roots. Such tines require lower draft (compared to "paraplau" tines). They are applied for subsoiling both lower soil and top soil during min-tillage.



Удобная регулировка глубины обработки

Depth can be simply adjusted by means of the pins, which limit the displacement of the roller frame parallelogram mounting.

Adjustments of the working depth for the first and second rows are independent of each other. The depth is adjusted by pins on the roller mounting parallelogram for the front tines and on the rear tines mounting parallelogram.

HF Agro fertilization system for FRANC and GULDEN subsoilers

As an option, the subsoilers can be equipped with precision fertilization systems. They can be equipped with both the HF Agro module (applicator) for applying liquid fertilizers (basic and starting), and a system for deep application of granular fertilizers.

This allows clients to apply fertilizer in one pass simultaneously with the tillage.



For liquid fertilizers

- 12V power supply from the tractor battery.
- tank volume - up to 1000 liters (at the request of the customer).
- semi-automatic or automatic (optional) system control
- optional control of pouring out on each line.

For granular fertilizers

- the depth of application can be adjusted (150 or 250 mm).
- mechanical drive of the seeding mechanism (from the drive wheel).



Premium class bearing unit

Subsoilers are assembled with superreliable maintenance-free HARP AGRO UNIT bearing units. Application of high-quality German plain bearings prevents wear of the roller adjustment mechanism rotary units.



Balancing mounting of roller

Balancing mounting of the doubled roller provides the constant contact of both rollers with the soil. The central screw allows to adjust the roller relatively to longitudinal plane.



Advantages of self-cleaning roller with spikes

The subsoiler is equipped with doubledcrowfoot roller.

Spikes break large clods, thrown on the surface, prepare and level the soil, facilitating further final seedbed preparation. Rotating spikes embed crop residues into the lower layers of soil and mix them with soil at depth of 15-20 cm.

TECHNICAL DATA

	FRANC-2,5	FRANC-3	FRANC-3sp	GULDEN
Working width, m	2,5	3	3	4
Tractor power, hp	min 160	min 240	min 270	min 350
Coupling with tractor	mounted		mounted	mounted
Basic weight, kg	1355	1650	2302	2522...2892
Number of discs	5	7	7	front row - 7; rear row - 6
Operating depth, cm	min 45		min 45	front row up to 45 cm; rear row up to 25 cm
Operating speed, km/h	8...12		8...12	8...12
Efficiency, ha/h	max 2,23	max 2,88	max 2,88	max 3,58
Fuel consumption, l/ha	10...18		10...18	10...18
Fertilizers application norm, kg/ha	30...500	30...500	30...500	—
Fertilizers application depth, cm	25	25	15/25	—
Total volume of tanks for fertilizers, l	500	750	750	—
Transport dimensions (length x width x height), mm	2860x2479x1885	2940x3000x1950	3330x3000x1950	4344x4054x2053

Harrowing

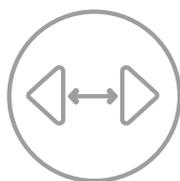


LARI

HEAVY TOOTH DRAG HARROW



TRADITIONAL
and ORGANIC



6,8-21 m



min 80 hp



max 25,2 ha/h

PERFECT EVEN FIELD

LARI drag harrow is a universal, simple and reliable implement with high efficiency and low fuel consumption.

Main application - soil loosening and levelling, seedbed preparation, moisture retention and weeds destruction.

LARI makes it possible to start field works earlier than other machines in any weather conditions. For example, unlike a seedbed cultivator, the drag harrow is almost insensitive to soil moisture, because there is simply nothing to stick and block due to design.





Durable rhomb-shaped tooth

The most durable tooth on the market is made of special spring steel with high surface hardness (55...60 HRC).



Adjustable attack angle

Two positions of teeth (active or passive) are suitable for any work conditions at depth from 3 cm to 8 cm. Sections suspended on chains provide perfect field contours following.



Module for applying granular fertilizers

LARI can be equipped with special modules for applying solid (granular) fertilizers with simultaneous processing. The modules can efficiently and evenly distribute nutrients.

LIRA XL and LARI have unified frame design which allow to transfer heavy tooth harrow into drag harrow and vice versa. Thus, buying one implement and special set of parts the farmer gets two implement for price of one.

TECHNICAL DATA

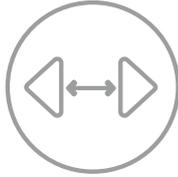
	NEW		LARI-15	NEW	
	LARI-7	LARI-12		LARI-18	LARI-21
Working width, m	6,8	11,4	14,6	17,8	21
Tractor power, hp	min 80	min 135	min 160	min 240	min 300
Coupling with tractor	semi-trailed	trailed	trailed	trailed	trailed
Weight, kg	3060	4431	5170	5850	7095
Teeth angles	22°; 40°	22°; 40°	22°; 40°	22°; 40°	22°; 40°
Working depth, cm	8	3-8	3-8	3-8	3-8
Working speed, km/h	8...15	8...15	8...15	8...15	8...15
Efficiency, ha/h	8,1	14	17,5	21	25,2
Fuel consumption, l/ha	2-3	2-3	2-3	2-3	2-3
Transport dimensions (length x width x height), mm	4500x2560 x3550	9977x3870 x3610	11650x3870 x3610	11650x3870 x 3610	16590x3870 x 3610

Harrowing



LIRA XL

HEAVY TOOTH HARROW



15-21 m



min 160 hp



max 25,2 ha/h

NEW LEGEND

LIRA XL perfectly distributes big amount of stubble remains on the field.

It is the only harrow capable to work on dry soil in autumn, destroying soil crust and preventing moisture evaporation.

One of the unique features of the LIRA-XL is possibility to perform 5 different operations in one pass. For example, simultaneously early spring harrowing and loosening of topsoil to a depth of 2-10 cm:

- keeps moisture;
- encourages germination of weeds to be destroyed then;
- levels the soil and prepares it for seeding;
- incorporates fertilizers and pesticides;
- uniformly distributes stubble remains.





Suspension of work sections

Parallelogram suspension of separate work sections allows to keep contact with a rough soil. It provides perfect contour following alongside the whole section width and uniform distribution of load per each spring block.



Adjustable attack angle

An optimal harrowing is provided by adjustable teeth angle. Attack angle can be adjusted through the whole section within limits 45-90°.



Pressure on the soil

A spring block eliminates undesirable vibrations of sections (bouncing) at high speeds, and adjusts a pressure of the work section springs on the soil from 400 to 860 kg.



Cable tightening of sections

Flexible cables allow to simplify the design of the harrow, ensure wings rigidity and reduce stresses. They provide perfect turning maneuvering and contour following alongside the whole harrow width.



Durable teeth

Spring tooth is made of high quality special steel with double hardening. The tooth diameter is 16 mm, but due to innovative technology the wear resistance is increased in two-three times with a high strength in an area subject to the torque stresses.



Forged cross



Module for applying granular fertilizers

Forged crosses provide stable durability and reliability compared to welded ones, with no regard to human factor.

In addition to the basic operations (which LIRA XL performs in one pass), this harrow can be equipped with a special module for applying granular fertilizers.

The module consists of a strong reliable construction, polyurethane tank and accurate dosing system that provides accurate application rate regardless of the speed.

LIRA XL and LARI have unified frame design which allow to transfer heavy tooth harrow into drag harrow and vice versa. Thus, buying one implement and special set of parts the farmer gets two implement for price of one.

TECHNICAL DATA

	LIRA XL-15	LIRA XL-21
Working width, m	15	21
Tractor power, hp	min 170	min 300
Coupling with tractor	trailed	trailed
Basic weight, kg	5685	7950
Teeth spacing, mm	60	60
Teeth tilt angle, °	45-90	45-90
Diameter of a spring tooth, mm	16	16
Operating depth, cm	2–10	2–10
Operating speed, km/h	max 20	max 20
Efficiency, ha/h	max 18	max 25,5
Fuel consumption, l/ha	2-3	2-3
Transport dimensions (length x width x height), mm	11360 x 4012 x 3890	16105 x 4012 x 3890

Harrowing

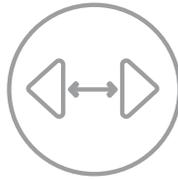


LIRA

HYDRAULIC SPRING-TOOTH
WIDE LEVEL HARROWS



TRADITIONAL
and ORGANIC



15-24 m



min 80 hp



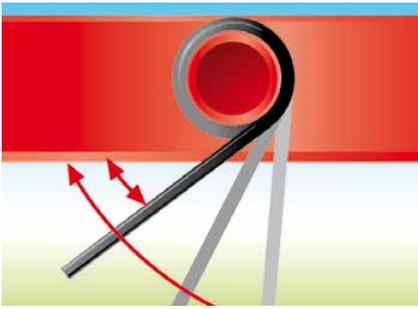
max 28,8 ha/h

LEGENDARY LIRA

The LIRA spring harrow is applied for:

- early spring harrowing for crust destruction and encouraging the weeds germination;
- weeds destruction in the “white fiber” phase;
- moisture retention by means of interruption of capillary flow from the substrate;
- even distribution of stubble remains on the field;
- incorporation of seeds and mineral fertilizers, distributed across the field;
- overall tillage when handling the fallow lands and seedbed preparation when fall-ploughing;
- windrowing of straw and hay.





Improved tillage quality

Work sections consist of five rows of the offset spring teeth with spacing of 38 mm between them. Such arrangement doesn't leave non-cultivated areas on the field.

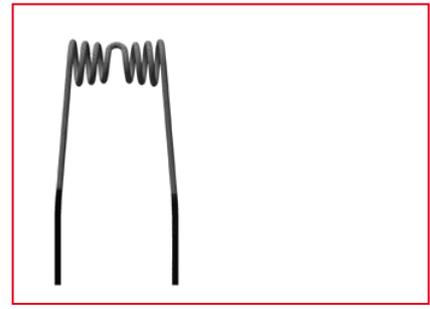
Careful cultivation is provided by the adjustable tilt angle of teeth. The teeth tilt angle is adjusted for entire section with limits from 15° to 90°, and interval of 15°.

Blockage-free work of teeth and perfect loosening are provided by vibration effect.



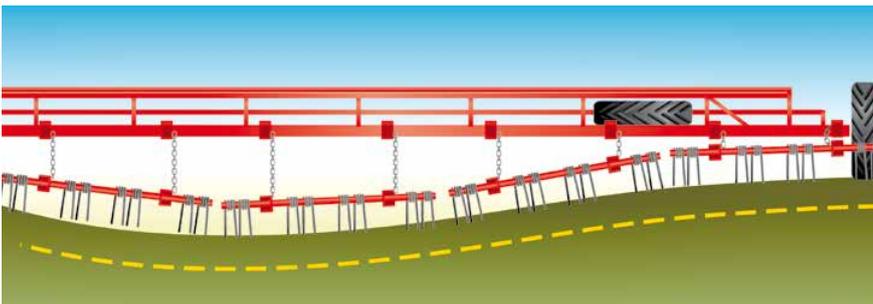
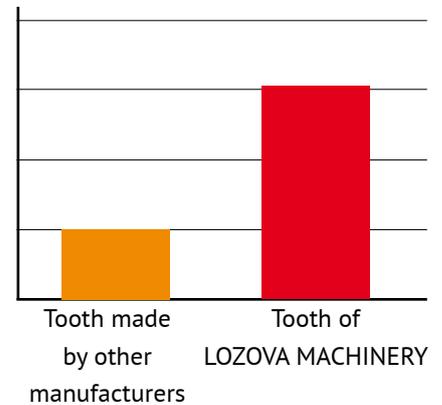
Premium class spring tooth

The spring tooth diameter is 10 mm, but application of innovative hardening significantly (in 2-3 times) increases the tooth wear resistance accounting for the torque stresses.



Good tooth lifetime

The spring tooth is made of high-quality special steel with special heat treatment: general bulk hardening and additional HFC hardening of ends up to 51-57 HRC.



Precise and carefull soil treatment

Having the chained individual working sections, the LIRA spring harrow perfectly follows any field contours in spite of its wide working width.

Special agricultural low-pressure tires almost fully eliminate the risk of damage to plants. Also there tires eliminate overcompacting of the soil and don't leave tracks.



Forged cross

Forged crosses compared to welded ones provide high durability and reliability regardless of "human factor".



Technological advantages complex

Due to simultaneous incorporation of the applied spray material, the REAL unit allows achieving the most effective incorporation and minimizing of the agent consumption, as well as environmental impact (due to lower application rate), and reducing the number of the unit passes.

REAL is equipped with a brake system.



PTO drive

For the uniform distribution of the spray material along entire working width, the REAL module is assembled with the ARAG high-quality control panel and the Annovi Reverberi axialpiston pump with tractor PTO drive.

The unit is equipped with a brake system which enhances the operating safety.



Complex for higher productivity

The REAL unit can be easily mounted to any other standard LIRA springtooth harrow, as well as with spring harrows from other manufacturers, because it is fixed to frame by U-bolts.

REAL UNITS FOR SPREADING OF PLANT PROTECTING AGENTS AND COMPLEX FERTILIZERS





Advantages LIRA M

- Telescopic rigid rod to prevent spontaneous convergence of the half-frames during sharp turns in the transport position.
- Hydraulic control of the transport wheel for easy folding / unfolding
- Splitting the boom into two parts with the ability to install the fertilizer tank directly on the boom.



3 m

Tooth harrows LIRA of the "M" series have a reduced transport width of 3 meters corresponding to traffic regulations of the EU countries

TECHNICAL DATA

	LIRA-15	LIRA-24	NEW		REAL-15+ LIRA-15	REAL-24+ LIRA-24
			LIRA-21M	LIRA-24M		
Working width, m	15	24	21	24	15	24
Tractor power, hp.	min 80	min 130	min 110	min 130	min 80	min 130
Tractor power, hp.	trailed		trailed		trailed	
Basic weight, kg	2030	3160	2950	3280	1090	2200
Number of working tools	200	320	280	320	30	48
Teeth spacing, mm	38		38		—	
Tank volume, m ³	—		—		2,5	5,0
Teeth tilt angle, °	15, 30, 45, 60, 75, 90		15, 30, 45, 60, 75, 90		—	
Pump performance, l/min.	—		—		185	250
Operating depth, cm	max 9		max 9		—	
Operating speed, km/h	8-15		8-15		8-15	
Efficiency, ha/h	max 18	max 28,8	max 24,8	max 28,8	max 18	max 28,8
Fuel consumption, l/ha	0,8...1,5		0,8...1,5		1,0...1,8	
Transport dimensions (length x width x height), mm	10455x 3710x2390	17190x 4400x2460	16080x 3000x2400	17580x 3000x2400	13876x 4200x2460	21600x 4400x2460

Harrowing

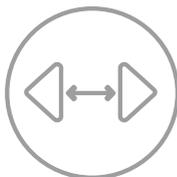


ЛІРА XS

LIGHT SPRING HARROW



TRADITIONAL
and ORGANIC



6-24 м



от 60 л.с.

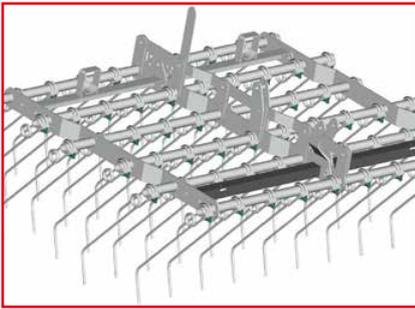


до 25,2 га/ч

The LIRA XS spring harrow is used for harrowing the soil, and to destroy the soil crust, especially on heavy, watery soils. When processing in the upper soil layer, the system of capillary bonds is broken, a loose mulching layer is created that protects the soil from drying out.

LIRA XS is heavily used for early spring harrowing, as well as for pre-emergence and post-emergence harrowing.

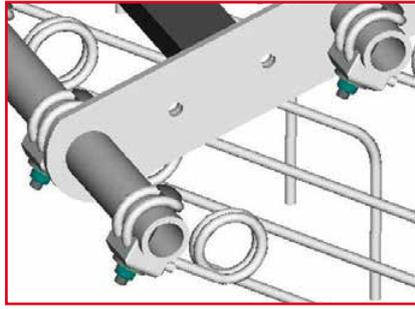




Central adjustment of the attack angle of the teeth

By means of simple adjustment with the help of the lever, sprung teeth can be adjusted for gentle or aggressive processing. The aggressiveness of the teeth is regulated centrally.

The angle of attack can be adjusted in a wide range from 20° to 90° degrees.

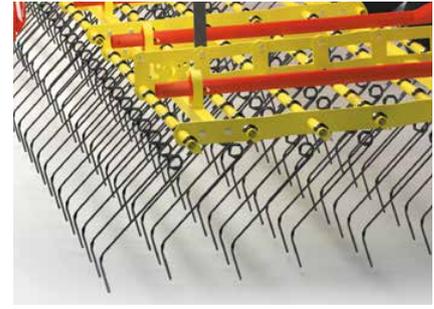


Thorough tillage

The working section has a width of 1.5 m and 60 teeth. The distance between the teeth is 25 mm.

The teeth are firmly fixed without the risk of skewing and turning during operation.

Thanks to lateral vibration of the spring teeth, in combination with a speed (10 to 15 km/h), covering surface tillage is performed.



Extended work life of teeth

As standard option, the machine has a spring tooth with a diameter of 7 mm and a tooth length of 510 mm. But as per customer request, the machine can be equipped with a spring of 6 mm and 8 mm.

The special processing of the teeth guarantees an extended service life (1.5-2 times higher than that of the competitors).



Simple adjustment of the machine work height

The support wheels are height-adjustable, which allows to adjust the working height of the machine.

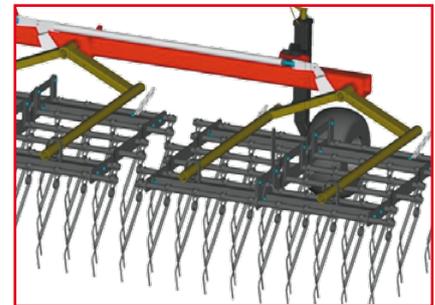
When working on tramlines or when moving a tractor with a machine along the rows, stepless adjustment of the track width of the support wheels is possible in the range from 1.4 m to 2.1 m.



Safe and easy transportation

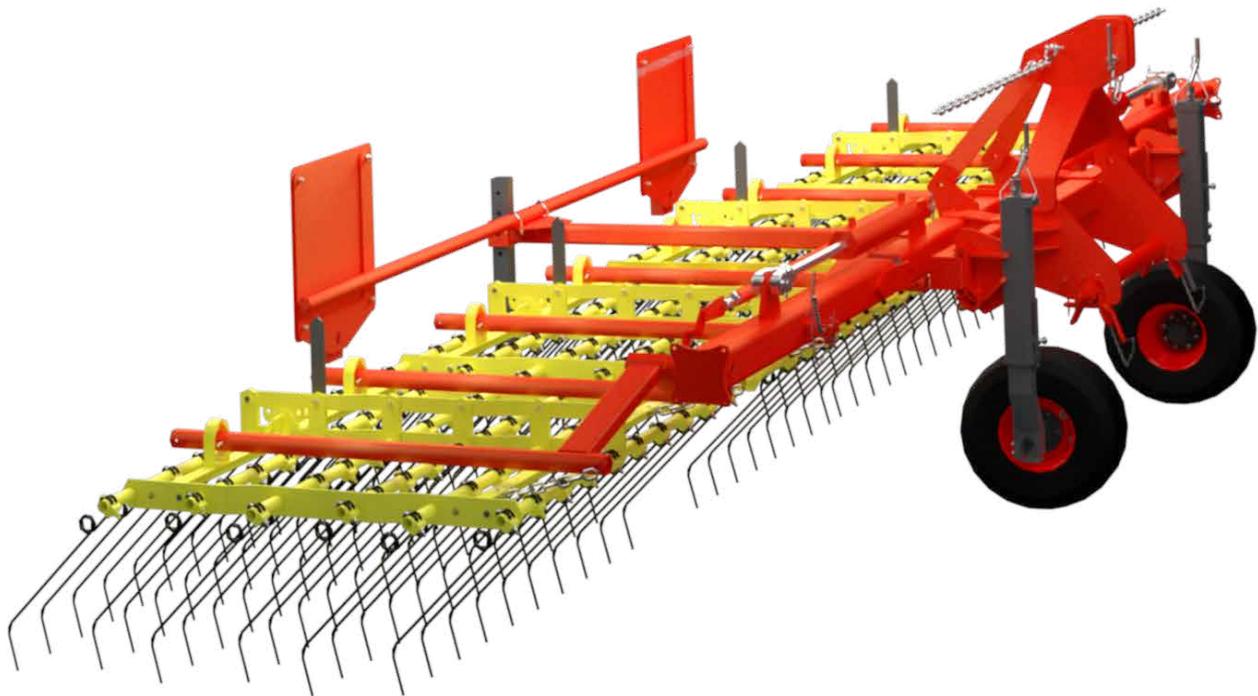
Harrow sections fold hydraulically into transport position right from the tractor cab. Due to the original folding system, the machine has a transport width of 3 m.

To increase the safety of transportation, reflective shields are installed as a standard option along with the set of lighting equipment.



Field copying system

Sections are mounted in front on a swinging balancer, which allows to copy the topography of the soil, and also guarantees a smooth ride, especially with a large width of the harrow.



Carrying out pre-emergence and post-emergence harrowing can reduce weediness of crops by 85-95%, which is especially important when applied without the herbicidal technology of growing crops.

With the timely use of the machine, small weeds in the white filament stage, break out, and stronger cultivated plants remain intact.

LIRA XS can also be used for caring for meadows: for destroying mole passages and loosening the turf.

TECHNICAL DATA

	LIRA XS-6	LIRA XS-9	LIRA XS - 15	LIRA XS- 24
Working width, m	6	9	15	24
Tractor power, hp.	min 60	min 80	min 80	min 130
Coupling with tractor	trailed		semi-trailed	
Basic weight, kg	765	1088	2250	3460
Teeth spacing, mm	25			
Teeth tilt angle, °	20; 32,5; 45; 57,5; 90			
Diameter of a spring tooth, mm	6/7/8			
Operating depth, cm	2-10			
Operating speed, km/h	8-15			
Efficiency, ha/h	max 7,2	max 10,8	max 15,7	max 25,2
Fuel consumption, l/ha	max 2			
Transport dimensions (length x width x height), mm	2204x3000 x2051	2204x3000 x3511	10455x3710 x3500	17170x4400 x3500

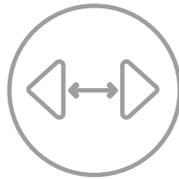


DINAR

ROTARY HARROW



TRADITIONAL
and ORGANIC



6,4 m



min 110 hp



max 10 ha/h

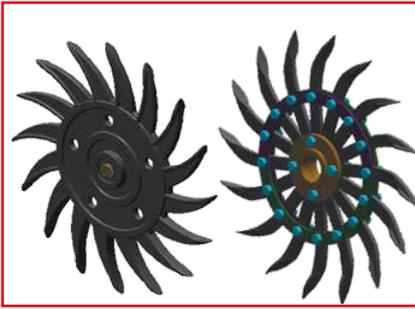
AERATE THE SOIL

DINAR intensive rotary harrows can be used both for conventional and conservation tillage technologies.

They are designed for overall and inter-row cultivation of various cereal and tilled crops, as well as vegetables on all types of soil. These harrows are especially effective in destroying heavy soil crusts, because DINAR intensively mixes and crumbles the soil to a depth of 5 cm (operation speed is up to 20 km/h).

DINAR harrows are effective for organic tillage, as they provide maximum soil aeration and prevent sweeping of stubbles, work gently through seedlings.





Enhanced star tool

Available two variants of star with diameter of 534 mm:

- 1) ductile iron casting - durable versatile star for all kinds of works;
- 2) assembly with forged teeth - for stony soils, teeth are changable.



Additional control of penetration

The implement can be additionally equipped with support wheels to adjust depth of stars penetration into the soil.



Careful work through the seedlings

The harrow is well adapted both for overall and inter-row tillage, and able to work when the crops are already grown. With minimum inter-row distance the DINAR works from 2 leaves to 20 cm of the plant's height. At bigger inter-row distance you can work with height of up to 60 cm.



Simple and fast mounting of tines

The tines are mounted by one bolt ("fast mounting"). Thus, the less timetaking mounting – the less costs for changing tines depending on different inter-rows.



Two-stage adjustment of pressure

Precise tines pressure on a soil is provided by two springs and two-stage compression, which keeps required depth during work.

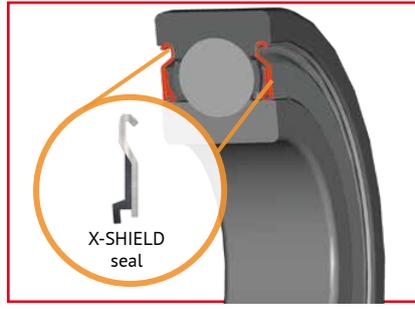


No gaps

Balance mounting of stars provides constant contact with a soil, reducing loads on bearing unit and improving the harrowing quality.



Simple transportation



Unique reinforced bearings



Possible mounting of the spring harrow

Hydraulically folded frame ensures the harrow compactness in transport position and minimizes loads on the tractor linkage. Transport width is 3 m.

There are two reinforced ball bearings with X-SHIELD seals. Due to high accuracy of manufacture the level of noise and vibration is significantly reduced, increasing service life.

Additional remote washer protects bearing from dust and stubble remains.

An additional spring harrow can be mounted in order to remove weeds from the soil and to crumble clods with additional soil loosening.

TECHNICAL DATA

	NEW		NEW	
	DINAR -6	DINAR-6,4	DINAR -9	DINAR -12,8
Working width, m	5,9	6,2	9	12,9
Tractor power, hp	min 80	min 80	min 120	min 130
Coupling with tractor	trailed	trailed	trailed	semi-trailed
Weight, kg	1270	1700	2477	4600
Number of tines, pcs	29	31	45	65
Number of stars, pcs	58	62	90	130
Number of wheels, pcs	max 5	max 5	max 5	max 5
Operation depth, cm	max 20	max 20	max 20	max 20
Operation speed, km/h	max 9	max 9,9	max 14,4	max 20,6
Efficiency, ha/h	2,5	2,5	2,5	2,5
Transport dimensions (length x width x height), mm	1377 x 2904 x 2597	1620 x 3000 x 3310	1700 x 3000 x 4000	7125 x 3000 x 2310

EQUIPMENT FOR CULTIVATION

LOZOVA MACHINERY CULTIVATORS ARE A RANGE OF HIGH-QUALITY AND ECONOMICAL MACHINES FOR VARIOUS TYPES OF TILLAGE, ALL TYPES OF SOILS AND CLIMATIC CONDITIONS.

EFFICIENT APPLICATION OF LOZOVA MACHINERY CULTIVATORS

	CHERVONETS	CHERVONETS XL	FLORIN	SHILLING	SANTIM
Stubble cultivation	-	-	+	+++	-
Pre-sowing preparation	+++	+++	+++	+	-
Steam care	+	+	+++	+	-
Inter-row processing	-	-	-	-	+++
Use in a plowed field	+++	+++	+++	+	-
Use in the field processed without formation turnover	-	+	+++	+++	-
Intensive mixing and crop residues incorporation	-	-	-	+++	-
Plant nutrition	-	-	-	-	+++

+++ Наиболее эффективное применение + Возможно использование - Невозможно использование

Seedbed preparation

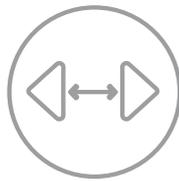


CHERVONETS

SEEDBED CULTIVATORS



TRADITIONAL
and ORGANIC



8 m



min 150 hp



max 9 ha/h

DESIGNED FOR PERFECT SEEDBED PREPARATION

Hardly any other implement can be such versatile as far as CHERVONETS allows to perform simultaneously:

- loosening the soil to a depth from 3 to 15 cm;
- incorporation of solid and liquid manure;
- second plowing and killing the weedage young crops;
- harrowing-out of the thread-like weeds;
- soil levelling.





Perfect seedbed preparation

Four rows of S-shaped spring tines with different working tools provide perfect soil tilling with further pulverization.



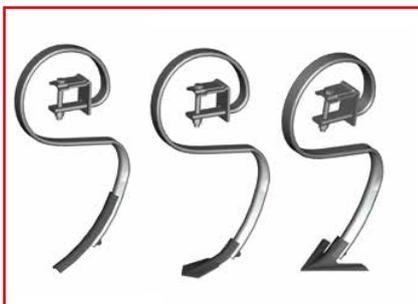
Loosened wheel tracks

CHERVONETS is equipped with track looseners, which can be adjusted



Perfect even surface

depending on track height and width. CHERVONETS has a spring-loaded multi-leveling bar for cost-effective levelling the soil in one pass. On medium and heavy soils the spring-loaded multi-leveling bar is set backward, to "grip". This compensates any unevenness in one pass. Springs protect the bar from damage. On light soil the bar is set forward, to "drag". Therefore, on level ground less soil piles in front of the bar, and the implement has a lower drag.



Working with different soil types

For working with different soil types the implement is supplied with three types of tools with working width from 35 mm to 150 mm. до 150 мм.

Working tools:

- wing sweep;
- duck foot;
- reversible chisel point.



CHERVONETS XL with module for applying liquid fertilizers

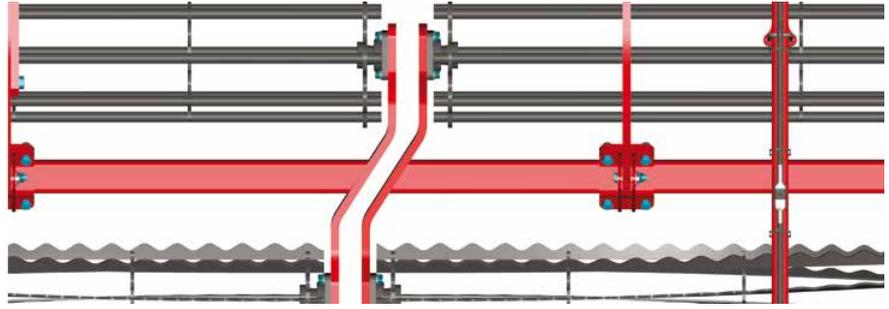
Presowing cultivators CHERVONETS XL can be equipped with an additional module for applying liquid fertilizers simultaneously with the main operation of the unit.

Large tank volume (3000 l) and precise dosing system ensure ideal plant nutrition.



Blockage-free roller

The roller has no central axle, thus there is no roller blockage even in overwatered conditions.



Rollers mating without gaps

Front and rear rollers have different diameters and rotation speeds, providing the finer soil fraction.

Doubled balance roller provides constant soil compacting with both rollers independently of ground contours. There are no gaps at the rollers joint.

TECHNICAL DATA

	CHERVONETS	CHERVONETS XL
Working width, m	8	8
Tractor power, hp	min 150	min 150
Coupling with tractor	semi-trailed	semi-trailed
Basic weight, kg	3850-3950	4000
Number of tines, pcs	65	45
Operating depth, cm	3-15	3-15
Operating speed, km/h	10-15	10-15
Efficiency, ha/h	max 9	max 9
Fuel consumption, l/ha	max 6	max 6
Transport dimensions (length x width x height), mm	5955x3000x4000	5955x3000x4000

Seedbed preparation

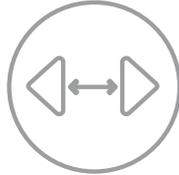


FLORIN

MULTIPURPOSE FIELD CULTIVATOR



TRADITIONAL
and ORGANIC



8 m



min 200 hp



max 9 ha/h

Field cultivator FLORIN is used for continuous pre-sowing soil cultivation, cultivation of light stubble and weed control.

The cultivator allows you to prepare the seedbed at a precisely defined depth and perfectly seals moisture.



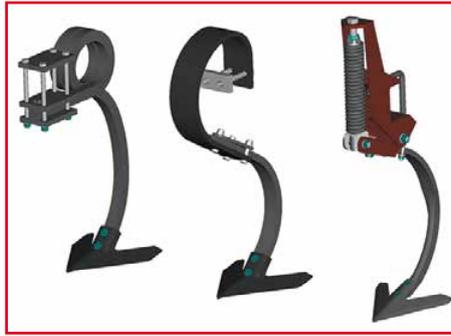


Unique frame

One of the longest frames in its class is designed for operation without clogging. Soil, crop residues and chemicals are evenly mixed and distributed over the entire width of the unit and the depth of soil cultivation.

The distance between the rows of racks is 850 mm.

The distance between the first and last row of tines is 4150 mm.



Three options of tines

There are three options of tines:

- spring tine with cross section 30 x30
- spring-loaded tine of variable cross-section, which reduces resistance and power consumption
- spring damper.

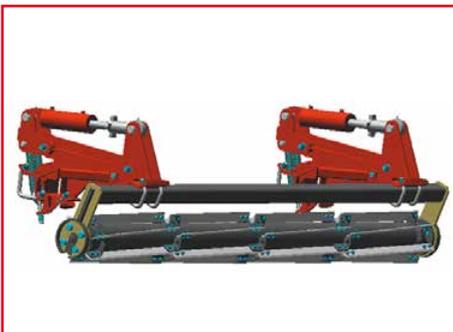


Packing roller, tooth harrow

The original design of the roller does not have a central axis, so the roller is not clogged even in wet soil and foul field conditions.

The spring tooth is made of high-quality stainless steel with a special double heat treatment.

The resource of LOZOVA MACHINERY tooth is three times higher than that of other manufacturers.



Possibility of working on stubble

Chopping roller is used for pre-crushing of stubble has blades made of boron steel for super-floatation on the stubble.



Additional cutting discs

The edge of each cutting turbo-disc enters the soil perpendicularly to the surface, providing the best longitudinal crushing of stubble.



Cultivation depth adjustment

It is necessary to ensure uniform cultivation depth to create an even seedbed layer.

The necessary cultivation depth is maintained by the support wheels.



WIDE RANGE OF ADDITIONAL OPTIONS

The FLORIN field cultivator can be equipped according to your needs. For example, clients can choose the appropriate rack option depending on the intended work, weather conditions and field tasks. FLORIN can also be equipped with additional rollers (front chopping and rolling), front cutting discs and a two-row tooth spring harrow.

TECHNICAL DATA

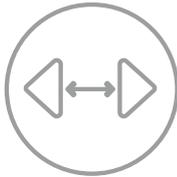
	FLORIN-8
Working width, m	8
Tractor power, hp.	min 200
Coupling with tractor	semi-trailed
Weight (depending on configuration), kg	5680-7460
Number of tines, pcs.	45
Number of working shares, pcs.	45
Operating depth, cm	3-15
Operating speed, km/h	10-15
Efficiency, ha/h	max 9
Fuel consumption, l/ha	max 8
Transport dimensions (length x width x height), mm	10387 x 3494 x 4000

Stubble cultivation, basic/seedbed preparation



SHILLING

INTENSIVE STUBBLE CULTIVATORS



2,24 - 8 m



min 80 hp



max 2,7 ha/h

PERFECT STUBBLE CULTIVATION

The SHILLING intensive stubble cultivators are effectively applied for minimum tillage, which encourages germination and development of crops. SHILLING has the best performance when cultivating the soil before and after grain and legume crops, and widely used for conventional tillage, fallow maintenance and seedbed preparation.

The SHILLING intensive stubble cultivator can be also applied for the intercrops incorporation. Its design provides high-quality mixing of crop residues with soil for the fast decomposition.

The cultivator performs the following operations in one pass:

- soil loosening and crumbling;
- weeds undercutting;
- chopping and incorporating the plant residues, fertilizers for mulching;
- levelling and compaction of the soil;
- seedbed preparation with stable depth.





Rubber support wheels

Demountable support wheels, which height can be adjusted by a screw, provide precise depth control even when using tractors without position control of the mounted system. As an option SHILLING can be equipped with rubber pneumatic wheels.



Optimal position of the center of gravity

Optimal position of the center of gravity is achieved by simple rearrangement of the depth limiter axle and forward displacement of concave discs with roller.

This significantly reduces loads on the tractor coupling and allows cultivator transportation.



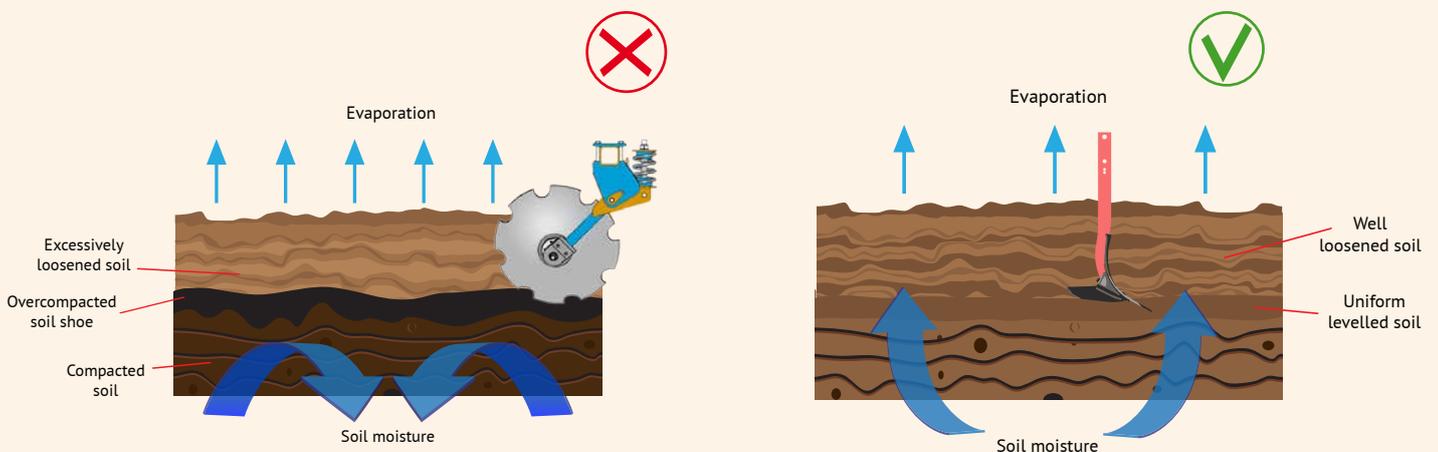
Optimal loosening and drainag

Wide wing shares are mounted at a special angle, ensuring undercutting the soil seam over the whole surface and optimal mixing even at shallow depths.

The working width of the share long edgepoints is stable during entire service life.

The SHILLING has advantages over disc implements with rigid tine, such as higher quality of cultivation with precise depth control and levelled seedbed.

Working tools have much smaller soil shoe compared to disc harrows.



MODULES FOR APPLYING LIQUID FERTILIZERS



The SHILLING can be equipped with an additional HF Agro module for applying basic and starting liquid fertilizers simultaneously with the main operation of the unit.

- 12V power supply from the tractor battery
- tank volume - up to 1000l (at the request of the customer)
- semi-automatic or automatic (optional) system control
- optional control of pouring out on each line



At the request of the client, SHILLING stubble cultivators can be equipped with a module for applying granular fertilizers.

TECHNICAL DATA

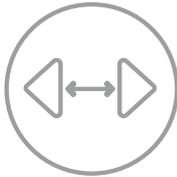
	SHILLING-2	SHILLING-3	SHILLING-4	SHILLING-6	THALER+ 2x SHILLING-4
Working width, m	2,24	3,14	4,0	6,0	8,0
Tractor power, hp	min 80	min 130	min 160	min 300	min 450
Coupling with tractor	mounted	mounted	mounted	mounted	semi-trailed
Basic weight, kg	748	1340	1480	2906	5764
Number of tines, pcs.	5	7	9	13	18
Operating depth, cm	5-22	5-22	5-22	5-22	5-22
Operating speed, km/h	7...12	7...12	7...12	7...12	7...12
Efficiency, ha/h	до 2,07	до 3,01	до 3,96	до 5,84	до 7,92
Fuel consumption, l/ha	6...15	6...15	6...15	6...15	6...15
Transport dimensions (length x width x height), mm	2613x2508 x1450	3427x3410 x1450	2902x4397 x1850	3554x3024 x3900	5734x3323 x4080

Surface tillage



SANTIM

INTER-ROW CULTIVATOR



6,4 - 12,4 m



min 80 hp



3 - 10 cm

The inter-row cultivator SANTIM with changeable row spacing from 30 to 75 cm is designed for inter-row cultivation of a wide range of crops: corn, sunflower, soy, sugar beets, peas, beans, etc. Also, the cultivator perfectly works on very wet soil without it sticking on its blades.

One of the options is to equip the cultivator with a high-precision liquid-fertilizer and plant-protection injection system.





Working tools

The working tools include: 32x12 mm spring tines equipped with 150 mm/200 mm wide duckfoot shares.

Upon request the unit can be equipped with 250 mm wide shares or 55 mm wide chisel shares.



Spring tine benefits

The spring tine of SANTIM ensures:

- reduction of the draft resistance and fuel consumption by at least 20%;
- uniform cultivation depth due to the prevention of the entire unit deepening when hitting an obstacle;
- self-cleaning of the working tools during the work process, which allows to work effectively on wet soil.



Cultivation depth adjustment

Parallelogram depth maintaining on each row.

Setting of the working depth with an adjustable spindle.



Additional soil loosening

For additional loosening in the middle of the rows or sowing strips, the implement is additionally equipped with sections with a finger-type hoe.



Plants protection from cutting

The automatic adjustment system with iron (or rubber) tracing wheels allows the cultivator to accurately follow the tractor and carry out cultivation very close to the rows without "cutting" the plants.

Protective guards on the bearing support ensure reliable protection of crop plants from cutting (optionally).



Possibility of simultaneous feeding

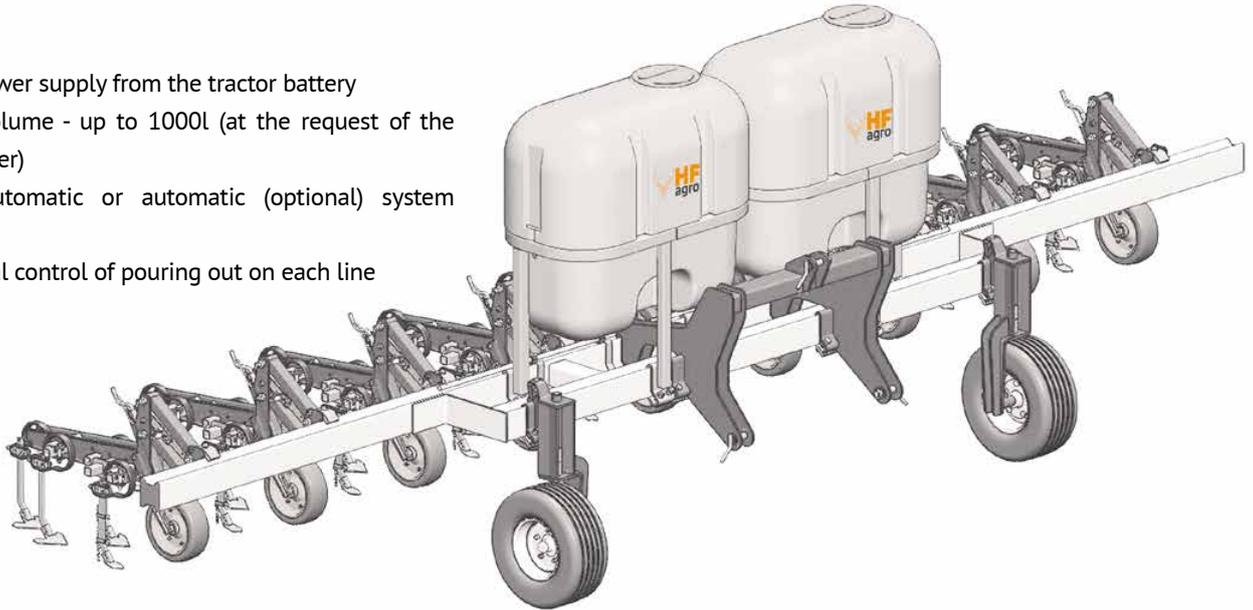
Optionally, it is possible optionally install HF Agro modules for fertilization on SANTIM row-crop cultivators.

LIQUID FERTILIZER APPLICATION SYSTEM



The HF Agro liquid fertilizer application system is a complex of innovative equipment that makes it possible to purposefully and accurately apply liquid fertilizers directly to the zone of its effective action simultaneously with inter-row cultivation and weed control.

- 12V power supply from the tractor battery
- tank volume - up to 1000l (at the request of the customer)
- semi-automatic or automatic (optional) system control
- optional control of pouring out on each line



TECHNICAL DATA

	SANTIM-8	SANTIM-12	SANTIM-16
Number of rows to be processed, pcs.	8	12	16
Working width, m	6,4	6,4	12,4
Tractor power, hp	от 80	от 80	от 120
Coupling with tractor	mounted	mounted	semi-mounted
Working speed, km/h		8-10	
Weight, kg	1200	1550	4500
Number of working sections, pcs.	9	13	17
Inter-row distance, cm	70	45	70
Distance from support area to the bottom area, mm		640	
Productivity, ha/h	6	6	12
Cultivation depth, cm		3-10	
Ground clearance, mm		min 300	
Overall dimensions in work position (length, width, height), mm	1700 x 3000 x 1800	1700 x 3000 x 1800	7200 x 3000 x 2400

AREA OF SPRING, TOOTH, DRAG AND ROTARY HARROWS USE



Performed operation	LIRA XS	LIRA	LIRA XL	LARI	DINAR
Light stubble plowing	-	-	+++	-	-
Distribution of crop residues	-	+	+++	-	-
Closing moisture in spring by steam	-	+	+++	+++	-
Moisture closure in spring for winter crops	+++	+++	-	-	+++
Combing out weeds in the white thread phase along the shoots	+++	+++	-	-	-
Presowing preparation on pre-plowed soil	-	+	+++	+++	-
Inter-row cultivation	-	-	-	-	+++
Aeration of the soil on shoots	+++	+++	-	-	+++
Care of the meadows	+++	+++	-	-	+

+++ optimally suitable

++ suitable

- not suitable



LOZOVA MACHINERY

4, Marshal Batitskiy Str.
Kharkov, 61038, Ukraine

+38 (057) 766-00-61

+38 (057) 766-00-62

agro@lozovamachinery.com

www.lozovamachinery.com

