

LIVESTOCK EQUIPMENT



PUSH OFF TRAILER "ATLANT"

PUSH OFF TRAILER «ATLANT» TZP is unique special trailer constructed as 5 different trailers in 1 machine. It can be tractor trailer for transportation different purposes with pushing unloading, reloading trailer, manure spreader, beet (piler) and beet reloader in the car.

Benefits:

- stability of the trailer when unloading on slopes - will never roll over on silage pits;
- unloading in low rooms with a ceiling height of 4.4 m;
- compresses green mass, silage, haylage - by the same takes 30-50% more cargo;
- uniform layer unloads the green mass on silage pits, and when harvesting sugar beet, it makes piles up to 3 meters high without using other special equipment;
- used as a spreader of organic fertilize;
- used as a storage hopper for the transportation of grain from the combine to the end of the field and reloading into grain trucks, for this it is only necessary to replace the tailgate with auger;
- used as a beet transporter into truck or for piling it on the end of the field;
- used as a silo reloader in truck for further transportation;
- used as a reloader of chips into the truck;
- used as a packer of silage in bags for further storage.



TZP-22



TZP-27



TZP-27-3



TZP-35



TZP-39



TZP-46



«ATLANT» MANURE SPREADER



Push off trailer «ATLANT» with changable backboard. Four trailers in one:

- sliding trailer;
- spreader of organic fertilizers;
- chaser bin;
- beet (piler)

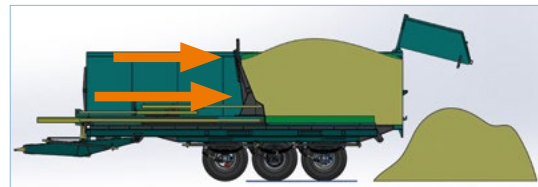
Principle of operation:

The semi-trailer is unloaded using the offset method. First, the rear side opens and the hydraulic cylinder is turned on, which moves half the bottom together with the front wall - pushes the load back. Having reached the middle, another hydraulic cylinder is turned on, which moves only the front wall to the end of the semi-trailer.

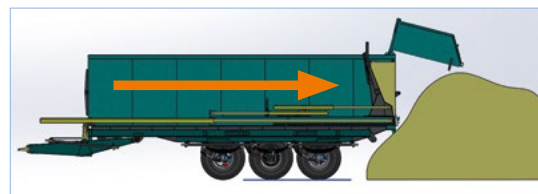
UNLOADING SYSTEM



The board opens



Half of bottom moves with front wall



Front wall moves

Basic equipment:

- braking system pneumatic (single-circuit, dual-circuit), hydraulic, individual approach;
- axles ADR (Italy), BPW (Germany);
- disks - Pronar (Poland);
- hydraulic movable front wall;
- towing eye Ø 40 mm, 50 mm Scharmuller (Austria) - individual approach;
- mechanical drawbar support.

Additional equipment:

- awning system;
- hydraulic suspension;
- manure spreader mechanism (replaceable back board);
- reloading auger (replaceable back board);
- beetroot reloading mechanism, beet piler (replaceable back board);
- additional metal stripes for additional volume;



up to 18 meters



up to 24 meters

Option: back wall for spreading defecate and chicken manure with bottom plates (spread up to 24 m)

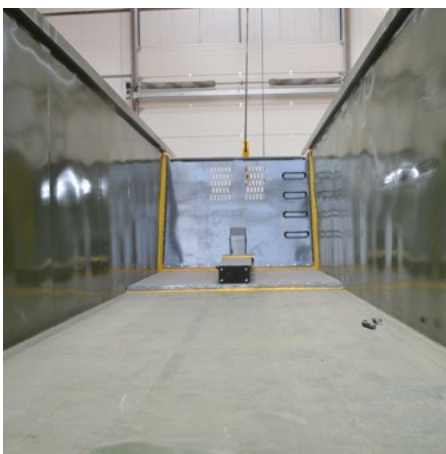
- replace towing eye to hemisphere K80 Scharmuller (Austria)

Spreading mechanism.

Installed instead of the rear side of the semitrailer, driven from the tractor PTO, at 540 rpm. It is equipped with an automatic safety system - a torsion load governor, which at peak loads stops the flow to the spreading beaters, blocking the oil feed to the hydraulic cylinder. Width of spreading is up to 18 meters (up to 24 m - defecate and chicken droppings). To spread defecate, chicken droppings on the spreading mechanism, a hydraulic flap is installed that covers the beater completely, leaving only the lower plates with blades.



A torsion load governor, which at peak loads stops the flow to the spreading beaters, blocking the oil feed to the hydraulic cylinder



Movable front wall



First and last axles are maneuvering



Grazioli



Width of spreading 18 m



Defecate spread with plates. Closed tailgate



RELOADING AUGERS FOR GRAIN

Reloading auger for grain.

Installed instead of the rear side of the semitrailer, driven from the tractor PTO at 540 rpm. The screw capacity is 6 tons per minute, the screw diameter is 520 mm. It is equipped with an automatic safety system - a torsional load regulator, which, at peak loads, stops the feeding of grain to the discharge auger, blocking the supply of oil to the hydraulic cylinder. The auger is equipped with a hydraulic damper, which regulates the rate of grain feeding into the conveyor.



ATLANT - RELOADING MACHINE FOR BEETROOT

Used for:

- transporting beetroot from the combine;
- reloading beetroot into the truck;
- beet piler in a heap at the edge of the field.

Principle of operation:

Front wall send beetroot on planar transporter, which driven by hydraulic motor from tractor hydraulic. Beetroot reloading machine has automatic sensor that stops the front wall in the case of overloading.

Benefits:

- Increasing productivity up to 30% of beet combine. Combine is unloading on the way without stop.
- Beet laying in ideal heaps. Beet laying runs in parallel, which allows you to control the uniformity and height of the beetroot.
- Reloading beetroot on the end of the field in other transport.



Loading beetroot into a trailer



Loading of vehicles



Hydraulic closing flap for grain auger



Beet piler up to a height of 3.0 m.



Hydraulically folding conveyor



AUTOMOBILE SLIDING SEMI-TRAILER "ATLANT"

AUTOMOBILE SLIDING SEMI-TRAILER AZP-60 (68)

AZP-60 (68) – is the same grain carrier, which without any problems transporting grain or other goods on public roads with speed 60-90 km/h, but this machine have a lot benefits against common grain carrier:

- First of all, safe method of unloading – in AZP it made by sliding method, that provides to semi-trailer possibility to stay straight and removes any chances to make an overturn. Also this method allow to unload all goods in low rooms;
- Second one – AZP-60 (68) will enter any field

without any problems, you just need to unhook it from the truck and hook it saddle semi-trailer with tractor and the wet field is not a hindrance for you anymore. The chassis of this machine is simple container carrier, which, if necessary can transport containers, for this you just need to remove body of "ATLANT" and put container on chassis.



Body AZP-60 for installation on a container ship



AZP-60 body mounted to the chassis



Saddle semi-trailer PSP-20 DOLLY



AZP-46 and PSP-20 Dolly at the harvest on the field

THE APPLICATION POSSIBILITIES FOR YOUR PUSH -OFF TRAILER

Operation area		January	February	March	April	May	June	July	August	September	October	November	December
1	Grass silage												
2	Maize sillage												
3	Graine maize												
4	Graine/rape												
5	Sugar beets												
6	Vegetables												
7	Muck spreading												
8	Compost												
9	Lime												
10	Defecate												
11	Bale transport												
12	Wood chips												
13	Transport of pallets												
14	Snow												



Unloading wood chips



Snow removal



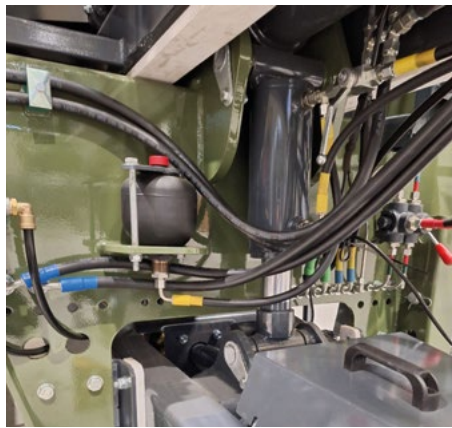
Construction work



Spreading manure

Characteristics	TZP-22	TZP-27 TZP-27-3	TZP-35 TZP-35-3	TZP-39	TZP-46	Body AZP-60 for installation on a container ship	PERSPECTIVE DEVELOPMENTS	
							AZP-68 with chassis	Body AZP-68 for installation on a container ship
Technically permissible total mass, kg	22 500	27 000	27 000	39 830	49 000	-	35 000	-
Empty weight, kg	6 000	8 200	8 600	9 830	12 000	7 150	13 200	8 200
Volume, m³	22	30	35	40	46	46	68	68
V with stripes, m³	26	36	41	47	55	55		
Body with board:								
- length, mm	5 650	7 100	8 100	9 600	10 800	10 800	12 300	12 300
- width, mm	2 300	2 300	2 300	2 300	2 300	2 300	2 300	2 300
- height, mm	1 950	1 950	1 950	1 950	2 000	2 000	2 400	2 400
Oil needed, liters	≈ 23	≈ 30	≈ 35	≈ 41	≈ 55	≈ 54	≈ 60	≈ 60
Standart tires	560/60R22,5	560/60R22,5	560/60R22,5	560/60R22,5	560/60R22,5	-	385/65	-
Maximum tires	850/40R26,5	850/40R26,5	850/40R26,5	850/40R26,5	650/50R22,5		R 22,5	
Axles, pcs.	2	2 / 3	2 / 3	3	4	-	3	-
Recommended tractor power (hp)	150-200	220-250	220-250	250-300	300-350	-	-	-

DRAWBAR SUPPORT



Drawbar with hydraulic height adjustment tractor and a hydraulic damper with hydraulic accumulator.



Mechanical drawbar support

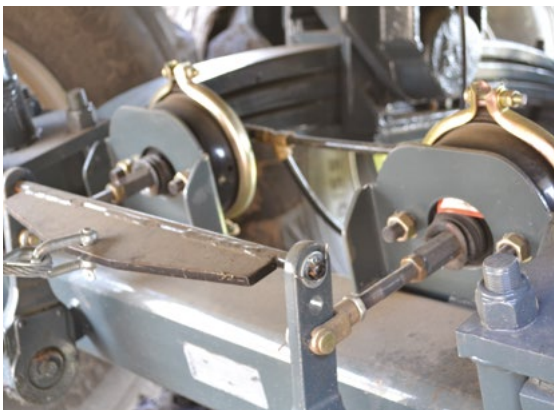


BRAKING SYSTEMS

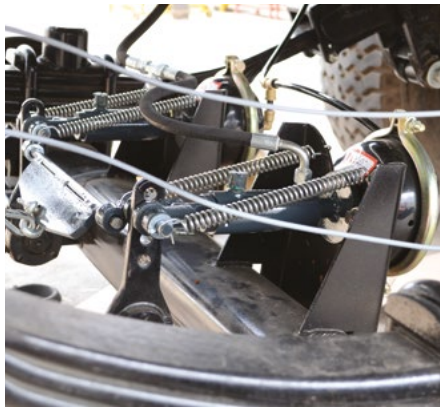
TZP Atlant trailers are equipped with one or two circuit air, hydraulic or mixed brake systems for any tractor.



Hydraulic brake system



Air brake system



Combined braking system

AWNING AND HYDRAULICS



Awning system (tent)



Hydraulic system of movable wall



TYPES OF SUSPENSIONS



Hydraulically movable chassis



Hydraulic suspension



1st and 3rd steering axles

INCREASE IN BOARD HEIGHT

Used to increase body volume. Height 380 mm.



Aluminum opening stripes



Metal stripes



Hydraulically-opening side

WEIGHING SYSTEM AND REAR VIEW CAMERA



Working at night



Camera



Monitor and sensor

UNLOADING MECHANISMS



Hydraulically opening net on a sliding wall



Mechanical opening net on a sliding wall



Rear valve for unloading grain

LED LIGHTING



Back light



Side and back LED lights to illuminate the technological track on the field



MANURE SPREADER



Manure spreader ROD-12

MODEL ROD-12:
ROD-12 organic fertilizer spreader with one ADR axle (Italy), two vertical flails and two discs with a diameter of 88 cm, the flails are mounted on a Grazioli reducer, complete with replaceable knives. The spreader works well with such materials: poultry droppings, compost, manure, peat, lime and other types of solid organic fertilizers. Vertical beaters are designed for farms where it is necessary to distribute the densest mass obtained as a result of the production of dairy or fodder livestock. Compared to machines with horizontal beaters, vertical beaters will spread the mass more evenly and over a large width (12-18 m, depending on the parameters of the applied mass). The rear wall can be hydraulically adjusted to set the seed rate.

- Spreader features:**
- the conveyor drive by hydraulic;
 - fertilizer is supplied by a chain conveyor (16 mm hardened chain) with a width of 1300 mm. In the event of a heavy foreign object hitting the trailer, a sensor is activated to stop the conveyor from moving;
 - the sowing dose is adjusted by the operator from the tractor's hydraulic system;
 - the height from the ground to the spreading vanes (plates) is 980 mm.

	ROD-12
Volume, m ³	12
Volume with extensions, m ³	15
Technically permissible total mass, kg	20 600
Empty weight, kg	6 600
Body dimensions, LxWxH, m	4,7 x 2,15 x 2,0
Trailer dimensions, LxWxH, m	8,15 x 2,95 x 3,3
Tires	650/65-30.5
Recommended tractor power (hp)	150-200
Working width, m	12 -18 m.

- Basic equipment:**
- ADR single-axle (Italy);
 - hydraulic drawbar support;
 - air brake system;
 - road lighting system



1.3 m wide apron conveyor.



Spreading fertilizers on 1 side at the edge of the field



Rear wall opened hydraulically



Regulation of the contribution rate



Application of organic fertilizers with lower plates - minimum rate



Vertical spreading rollers

SELF-LOADING BALE TRAILERS



Self-loading bale trailer PT-24

Principle of operation:
Self-loading bale trailer picks up the bales with a hydraulic paw and loads them on to itself. Then, the front wall, which is driven by a hydraulic motor and chain transmission, moves them back. Unloading is also automatic, due to the movable front wall, which pushes all the rolls back.

Work efficiency:
When using bale trailer, only one tractor is needed, which does not attach additional equipment to itself and does not require the organization of the operation of a whole complex of agricultural machines for many days. So, it takes about 12 minutes to load bale trailer, which allows you to collect bales from a 100-hectare field and transport them to a distance of 5 km in 2 days. In this way, up to 1,000 bales can be harvested in one day with two bale trucks.



The universal hydraulic paw on the go unfolds the roll and loads on the platform

Advantages:
He loads, unloads and transporting bales himself without the involvement of other loaders and vehicles, which significantly saves time and money.

- Basic equipment:**
- air braking system (one or two contoured), hydraulic;
 - axles ADR (Italy);
 - hydraulic motor WR-160 (Danfos license);
 - mechanical drawbar support;
 - hydraulic grip for loading the bales.



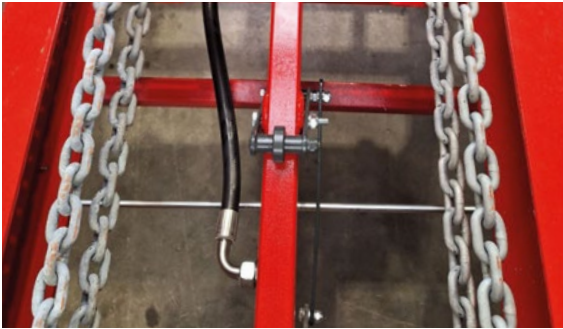
Loading



Transportation



Unloading



Hydraulic limiter of the sliding wall

Distance to the field	PP-9,5/3 traktor - 1(2) operator - 1(2) trailer of 28 round bales	PT-18 traktor - 1 operator - 1 trailer of 18 round bales	PT-21 traktor - 1 operator - 1 trailer of 21 round bales	PT-24 traktor - 1 operator - 1 trailer of 24 round bales	PT-30 traktor - 1 operator - 1 trailer of 30 round bales
2 km	34 bales/hour	60 bales/hour	65 bales/hour	69 bales/hour	75 bales/hour
4 km	29 bales/hour	42 bales/hour	46 bales/hour	50 bales/hour	56 bales/hour
6 km	26 bales/hour	32 bales/hour	36 bales/hour	39 bales/hour	45 bales/hour
8 km	23 bales/hour	26 bales/hour	29 bales/hour	32 bales/hour	38 bales/hour
10 km	21 bales/hour	22 bales/hour	25 bales/hour	27 bales/hour	32 bales/hour
Go to the field (2 km)	4 min	4 min	4 min	4 min	4 min
Loading	35 min	9 min	10,5 min	12 min	15 min
Unloading	6 min	1 min	1 min	1 min	1 min
Return to the field(2 km)	4 min	4 min	4 min	4 min	4 min
Total cycle time	49 min	18 min	19,5 min	21 min	24 min

	PT-18	PT-21(E)	PT-24(E)	PT-24(R)	PT-30(E)	PT-30(R)
Quantity of bales pcs.	18	21	24	24	30	30
Diameter/size of bale, m	1.2 - 1.5	1.2 - 1.5	1.2 - 1.5	1.5 - 1.8	1.2 - 1.5	1.5 - 1.8
Capacity ,kg						
- grab	500	1000	1000	1000	1000	1000
- platform (depends on tires)	6000 / 7000	10000 / 15000	10000 / 15000	10000 / 20000	10000 / 15000	10000 / 20000
Weight, kg						
- self (depends on tires)	2500	6050	6250	6600	6700	7000
- technically permissible total mass	8500 / 9500	16050 / 21050	16250 / 21250	16600 / 26600	16700 / 21700	17000 / 27000
Dimensions, mm						
- length	10140	11700	12700	15000	15000	15000
- width (depends on tires and bale)	2550 / 3000	2550 / 2920	2550 / 2920	3400 / 3500	2550 / 2920	3400 / 3500
- height (depends on tires and bale)	3920 / 4000	3800 / 4000	3800 / 4000	4000 / 4600	3800 / 4000	4000 / 4600
Axles, pcs.	1	2	2	2	2	2
Tires	425/70-18 500/50-17	425/70-18 600/50R22,5	425/70-18 600/50R22,5	425/70-18 600/50R22,5	425/70-18 600/50R22,5	425/70-18 600/50R22,5
Recommended tractor power (hp)	80	120	120	120-220	120-220	120-220

Note: E - Eurostandard (for bales 1.2-1.5m) R - extended platform (for bales 1.5-1.8m)

SELF-LOADING BALE TRAILERS



	TK-12
Quantity of bales, pieces	12 / 12 / 14
Dimensions of bales, m	2,4x1,2x0,9 2,4x1,2x0,8 2,4x1,2x0,7
Capacity, kg	
- paw	2 000
- platform	11 340
Weight, kg - own	8 350
Technically permissible total mass, kg	19 690
Sizes, mm	
- length	8 670
- width	3 630
- height	3 980
Axles, pcs.	4 - half-shafts
Tires	550/45-22,5
Recommended tractor power (hp)	185

MODEL TK-12:

Used for picking up square bales from the field, transporting and storing them at the destination. The bales are picked up using a tongue design (grabbing the bales from both sides and lifting them onto the platform). A feature of the bale truck is the simultaneous loading of 2 rectangular bales onto the platform.

Features of work:

On the platform, the bales are moved back with the help of a conveyor and fixed by two racks. When the bales are loaded further, the racks move back.

When the bales are fully loaded, unloading takes place in a heap on a flat and hard surface. All operations are controlled and performed by the operator from the tractor cab.

Work productivity - 180 bales per hour

Basic equipment:

- balance suspension, semi-axle ADR 90x90 (Italy) – 4 pcs
- Pronar discs (Poland);
- mechanical support;
- optional towing ring 40, 50, 90 mm Sharmuller (Austria);
- electrical system 12 volts
- joystick control from the tractor cab
- low maintenance hydraulic system

Unloading the bale semi-trailer on a flat and solid surface takes 30-40 seconds

PLATFORM TRAILERS



The PP series platform trailers are a universal solution for transporting various cargoes in different sectors of the economy. Thanks to their reliable metal construction and flexibility of use, this equipment is in demand among farmers in different countries. **Their main purpose is to transport square and round bales, as well as loads on pallets or in boxes.** They can be aggregated with tractors from all manufacturers.



PP-9/2

Technical specifications:

- pneumatic braking system (single-circuit, dual-circuit), hydraulic, individual approach;
- ADR (Italy) and BPW (Germany) axles;
- trailer hitch Ø 40 mm, 50 mm or 90 mm (Scharmüller - Austria);
- wheels - BKT / Pronar;
- winch (AL-KO Germany);
- platform extension up to 3 m (optional).



PP-12/3

	PP-9/2	PP-12/3
Technically permissible total mass, kg	13 000	21 300
Trailer weight, kg	4 000	5 300
Platform LxW, mm	9010x2390	12010x2450 (2155)
The sizes of the platform LxWxH, mm	11595x2550x2685(1300)	14265x2450x2385(1355)
Platform area, m ²	21.5	29.4
Standart tires	425/70-18	425/70-18
Maximum tires	500/50-22,5	500/50-22,5
Axles, pcs.	2	3

BEET TRANSFERER

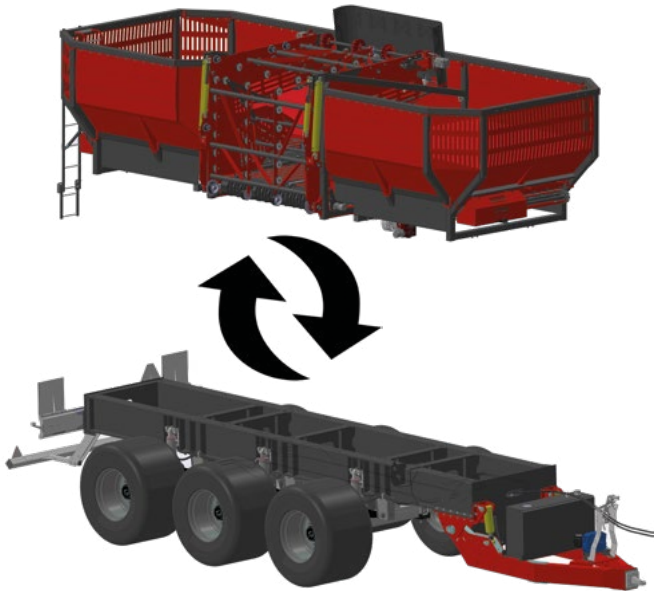


PPB-50 TITAN

Characteristics	PPB-45	PPB-50
*Own weight (variation possible), kg	16 800	17 000
*Total weight (variation possible), kg	48 800	49 000
Load capacity, kg	32 000	32 000
Body volume, m3	Up to 45	Up to 45
Maximum speed, km/h	25	25
Overall dimensions, Length, mm	12 000	11 000
Width, mm	3 000	3 500
Height (on wheels), mm	4 000	4 000
Conveyor dimensions (LxW), mm	3,700 x 2,000	3,700 x 2,000
Unloading height min-max (conveyor height from the ground), m	1.5 – 5.8	1,5 – 5,8
Recommended tractor power, hp	from 400	from 400

Its main purpose is to quickly and efficiently reload sugar beets from the combine and transport them to the edge of the field with subsequent reloading into a car or stacking them in a cart.

- The sophisticated design minimizes beet losses during transportation and reloading.
- The wide 2-meter slatted conveyor unfolds hydraulically (length 3.7 m) and has a high unloading speed - from 5 to 27 tons per minute (depending on the lifting height), thus the PPB-45 ensures efficient reloading of beets into a truck or quick formation of ridges.
- The configuration for right- or left-hand unloading varies on each loader, allowing it to be used with combines from all manufacturers.



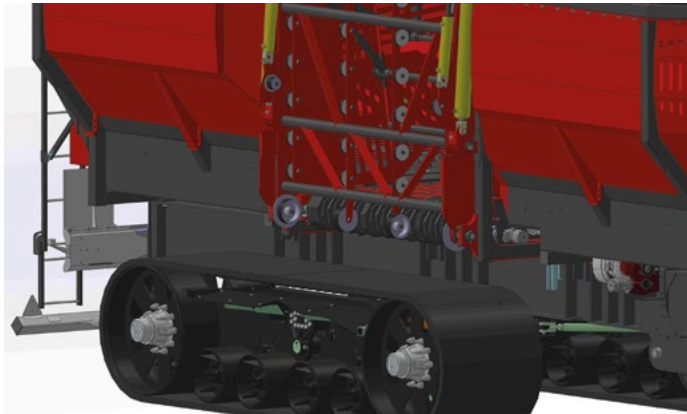
Right-hand or left-hand unloading (upon customer request)



Sugar beet reloader



ALPHA suspension and axles (ADR Italy)



Option - caterpillar track 0,9 x 3,8 m.



Unloading beets at a height of up to 5.8 m.

SILAGE EQUIPMENT

The **SLON silage compactor** is a special attachment for quick and high-quality compaction of haylage without disturbing the structure of the feed. Designed for work in large agricultural enterprises, livestock breeding, and fodder farms.

Due to the ribs (disks) cutting the green mass, the maximum compaction effect is achieved due to the displacement of air from the mass.

Silage roller - SLON tamper increases silage density (up to 30%). Result:

- increasing the capacity of silo pits;
- reducing the air content in the compacted mass;
- ensuring the long-term preservation and quality of the product.

	SLON-2,8	SLON-3,2	SLON-4,0	SLON-4,4
Width, mm	2 750	3 250	4 040	4 385
Height, mm	1 645	1 645	1 645	1 645
Length, mm	1 745	1 745	1 745	1 745
Weight, kg	3 360	3 885	4 850	5 800
Volume of the box, m³	1,13	1,13	1,3	1,3
Number of wheels, pcs	9	11	13	15
Wheel diameter, mm	900	900	900	900
Wheel width, mm	130	130	130	130
Required tractor power, hp	150	200	250	from 250



Silage density increases up to 30%



Box for sand, crushed stone



Silage blade

ATTACHMENTS



Grab for rectangular bales



Round bale grab

ZAVOD KOBZARENKO (UKRAINE)
42500, Sumy region., Lypova Dolyna, Rusanovscka street, 17
www.kobzarenko.com.ua

KOBZARENKO SP.Z O.O. (POLAND)
Milenijna 2, 97-410 Żłobnica
www.kobzarenko.eu

tel. +48 780 089 436, +48 503 776 010, +48 506 892 475,
+38 095 478-25-16, +38 050 328 61 30