



APOLLO PREMIUM

UNIVERSAL SPREADERS





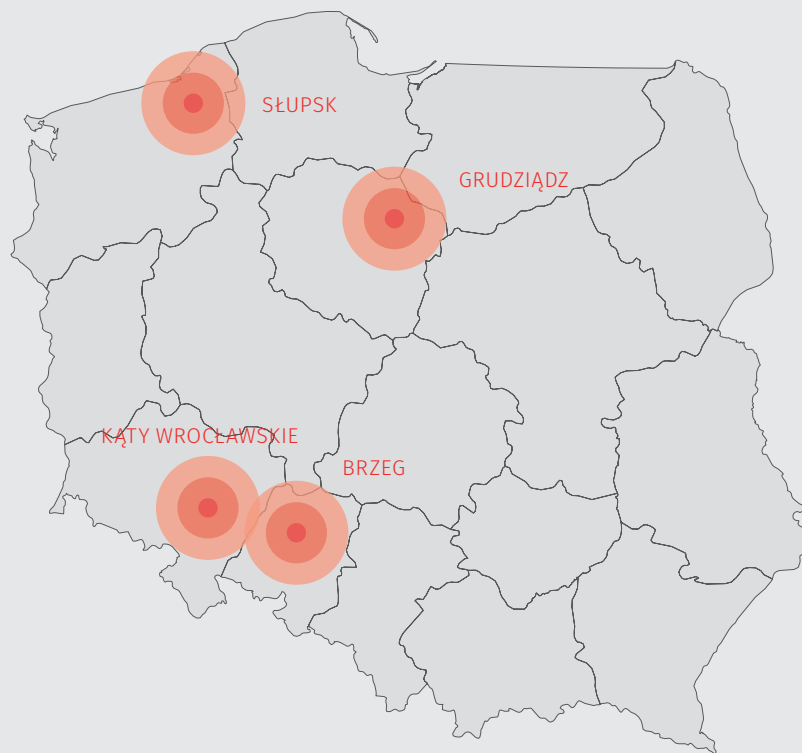
UNIA Sp. z o.o. is a Polish manufacturer offering the largest complex range of agricultural products in Europe.

We own 4 modern factories, equipped with world-class production equipment. Our history and knowledge dates back to almost 140 years. First cultivator and reversible plough in the world were produced in our factory.

Our products, through specialized distributors, reach farmers in more than 60 countries of the world, on every continent.

Thanks to this knowledge, we offer our customers not only modern machines, but also the best agronomic solutions used in the world's most demanding markets.

We offer a complex range of agricultural equipment: ploughs and cultivators, seeding equipment and combination seed drills, spreaders, balers and bale wrappers, sprayers, potato harvesters as well as grain storage technology.



4

FACTORIES

11,5 ha

PRODUCTION
AREA

1200

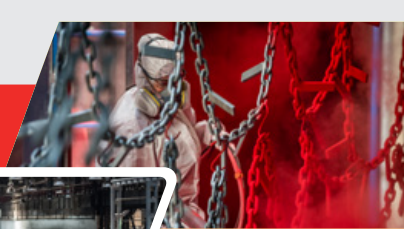
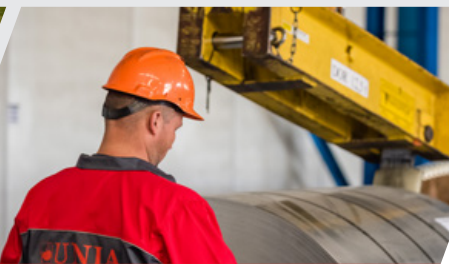
EMPLOYEES

700

ITEMS
IN OFFER

60

MARKETS



MANURE FERTILISATION

Like mineral fertilisation, manure fertilisation is subject to increasingly stringent regulations. From the environmental point of view, the minerals contained in natural fertilisers can be as destructive to the environment as those contained in granulated fertiliser. That is why in the total fertilisation balance, they are subject to the same rules. From the agricultural point of view, it is an equally or even more valuable fertiliser as it is enriched with precious organic matter which has an influence on the humus content of the soil. Higher humus content means greater water storage capacity, the development of the so-called soil life, and overall improvement of soil structure.

Organic fertilisation is obviously supplemented with additional mineral components. In the latter case, great importance is generally attached to the precise fertiliser distribution on the field surface while this is not always the case in manure. And yet it is an equally important element of fertilisation. Even distribution of the components delivered to the field together with manure is a prerequisite for optimised overall fertilisation.



Even distribution of organic fertilisers

is an important factor influencing the economic result of organic fertilisation.

Proper fertilisation guarantees, inter alia, the following:

- optimal use of minerals on the field surface;
- fast decomposition of manure and availability of components for plants;
- easy mixing of the fertiliser with the soil during cultivation;
- minimising the risk of the clogging of cultivating tools with manure;
- reducing the “felt” layer formation at the bottom of the furrow to limit moisture absorption;
- the possibility of reducing mineral fertilisation expenditure.



APOLLO PREMIUM

The tunnel spreaders are increasingly popular. They are featured by large wheels which provide excellent driving in the field, even in extremely difficult terrain conditions. Large diameter of tyres ensure easy work in the most difficult terrain conditions. Large tyre width and wide wheel track preventing rolling on the tractor's tracks reduce soil compaction and rut formation. The wide wheel track also means greater stability of the machine on uneven ground. As a result, the spreaders of this type are chosen by the most demanding farmers.

The Apollo Premium series brings together all these features and offers even more. These models are featured by a wide adapter, much wider than the trailer box. This unique solution significantly affects the quality and performance of the machine's key work unit. It is also possible to choose the adapters according to the needs of the farm. The leaf spring drawbar shock absorption system significantly increases the comfort of work, both on the road and in the field, and at the same time reduces structure overload. As a result, Apollo Premium spreaders are at the top of the list of competitive products.

Wide adapter

Apollo Premium spreaders are equipped with a wide adapter located just behind the trailer box and not inside it. In Apollo 11 Premium and larger models, the adapter is 2 m wide, which is 50 cm more than the box clearance. This ensures that the manure is evenly drawn from the tank sides without energy loss. The large diameter of the vertical adapter shafts makes it easier to take the material and spread it over the full working width, and reduces powertrain overload. The adapter works more smoothly and achieves higher throughput. Its forward-leaning position ensures even material intake, without spreading, and even spreading pattern.

Thanks to the use of a wide adapter, the excellent driving characteristics of the tunnel spreader are combined with the great performance of classic spreaders equipped with a wide box.



Models

The Apollo Premium spreaders are designed to meet the requirements of both smaller farms (e.g. with a cattle herd of 20–30 pieces) and larger farms requiring a high level of performance. The smallest model in the series requires a tractor of approx. 80 HP. The maximum load capacity for single-axle models is 16 tonnes.



| Apollo Premium | Box volume [m3] | Nominal load capacity [t] | Max. load capacity [t] | |
|----------------|-----------------|---------------------------|------------------------|--|
| 8 | 7,5+3 | 6,5 | 9 | |
| 10 | 10+3 | 8 | 11 | |
| 11 | 11+3 | 9 | 12 | |
| 13 | 12+3,5 | 10 | 13 | |
| 14 | 14+3,5 | 11 | 14 | |
| 16 | 16,5+3,5 | 13 | 16 | |

DRIVING CHARACTERISTICS

Trailer boxes of Apollo Premium spreaders are smaller in width, but have a sufficiently large volume and a relatively low loading height. This is because the box floor is lowered. The box is mounted directly on the axle. In this case, the rigid axle is the optimum solution as it guarantees the stability of the spreader, even on a sloping ground. The vibration damping is thanks to large-size tyres and sprung drawbar.



Low centre of gravity

The trailer box is mounted directly on the axle, which significantly increases the stability of the spreader. In combination with its large wheel track, Apollo Premium is perfect for working in difficult terrain, even on hilly terrain.



Comfort and stability

The longitudinal leaf spring placed in the line of the drawbar is a very effective solution improving comfort and safety at work. It provides exceptional stability while driving and reduces the load on the tractor's hitch, even on uneven ground. With the three-stage position adjustment, height of the drawbar can be adapted to any model of the tractor.



Large wheels

The large-diameter wheels reduce rolling resistance and ensure excellent off-road performance. The weight of the machine is distributed over a large area of soil to prevent excessive compaction and rut formation. The wheels do not clog, even if used with a large amount of fresh manure and on a slippery, wet ground. With the Apollo Premium spreaders, manoeuvres are extremely efficient and comfortable.



Grassland use

Tires with a cube protector, optionally available, provide additional soil and turf protection. Cattle production and grassland are inseparable. Grassland manure fertilisation is a common practice in many farms. Thanks to meadow tires combined with large-diameter wheels, this procedure does not cause rut formation and turf damage.

ADR axles with heavy duty brakes

Approved axles, adapted to the load capacity of the spreader, guarantee the appropriate load capacity and braking power.



Soil protection

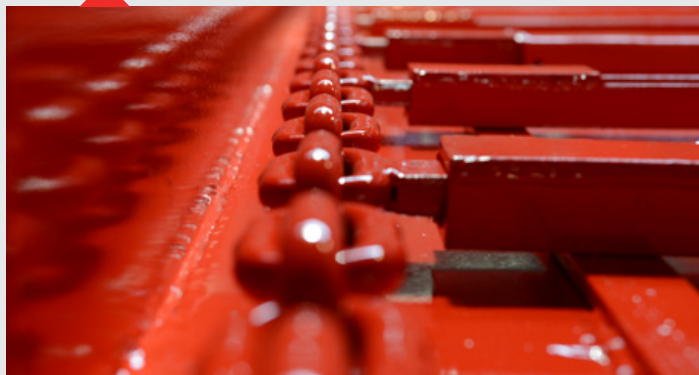
The wheels of the Apollo Premium spreader are wider than those of the tractor so that the weight can be distributed over an even larger area. The field remains even and rut-free after the travel and work in high humidity conditions does not end up getting stuck.

ROBUSTNESS AS STANDARD

The strong powertrain with overload protection is a guarantee of trouble-free operation. Solid conveyor chains placed in large diameter socket wheels ensure machine durability. Strong axles and brakes selected to match the load capacity of the spreader ensure safety. All these features are ensured by the Apollo Premium spreader design engineers.

Tight and strong box

Made of 3-mm thick Domex sheet metal, is a perfect compromise between box strength and machine weight. The structure is tight to ensure the transport of loose and semi-liquid materials.

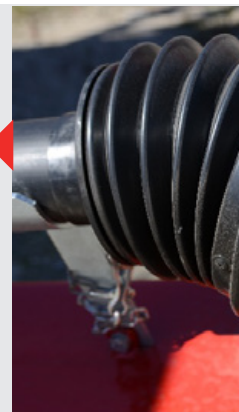


Powertrain

With short rollers. Short shafts, used in place of one long shaft, smoothly transmit the power and do not generate vibrations.

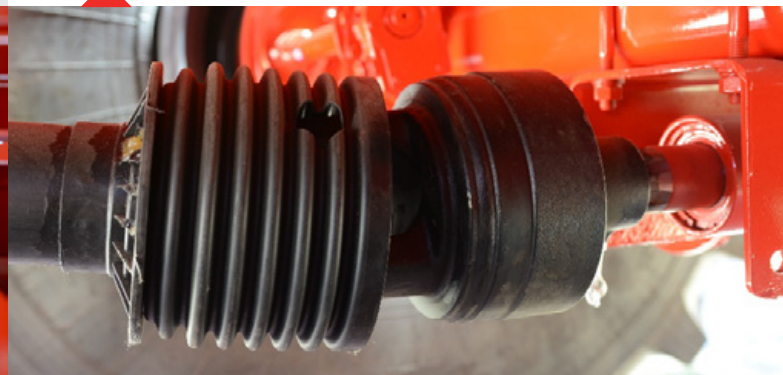
Wide-angle shaft

Available as standard, it ensures smooth operation when cornering and a long service life.



Overload clutches

The overload and one-way clutches protect the adapter and the entire powertrain of the spreader and tractor against shocks.



Hydraulic conveyor drive

Hydraulic drive means flexibility. The feed speed is smoothly controlled by means of an oil flow regulator. Even feed rate ensures that the equal manure dose is maintained. The power from the hydraulic motor is transmitted to the conveyor via a heavy-duty transmission.



Large-diameter socket wheels

The large diameter of the socket wheels reduces overload and wear on the chains. The self-cleaning wheel profile prevents the accumulation of manure under the chains.



Easy chain tensioning

The adjustment screws located in a well accessible place make it easier to operate the tensioners and the strong springs keep the chains tensioned.



Strong conveyors

The number of floor conveyors is adapted to the requirements of the machine. In Apollo 13 Premium and smaller models, one conveyor ensures easier operation. In larger models, two conveyors are used to handle high loads. The Apollo Premium spreader conveyors are made of very strong mining chains with 14-mm links.

CONTROL

Efficient control system is a prerequisite for making full use of the spreader. The control system provides a high level of comfort and functions improving its quality, efficiency and precision. One of the functions is the automatic dose maintenance, regardless of the travel speed, to guarantee the proper mineral balance on the field surface.

RBS valve

Uses all the functions of a well-equipped spreader with a tractor with a small number of hydraulic outlets. One outlet with a constant output can support both the conveyor drive and additional functions, such as box tailgate, adapter covers and deflectors.



Starter Spread

Is an easy-to-use controller to adjust the conveyor feed speed directly from the cab with the possibility of viewing operating parameters. In the "pro" package with a conveyor speed sensor and tailgate opening indicator, the controller precisely sets of the manure dose in t/ha or in m³/ha using the fertiliser chart supplied with the spreader.

Electronic controller

Ensures remote control of the extension speed directly from the tractor cab. It is operated using the Starter Spread or Superior computer.



Superior

Is an advanced computer with extensive functionality. It enables precise control of the conveyor feed and automatic maintenance of the fertilisation dose, regardless of the travel speed. It can operate hydraulic functions (deflectors, adapter cover and the box tailgate), and its large, colour display shows operating parameters and messages. The touch panel and ergonomic joystick make operation of the spreader a sheer delight. Thanks to the compatibility with other UNIA machines equipped with Superior (the so-called small ISOBUS), it is possible to use one computer for various tasks and reduce the number of terminals in the tractor.



| | Standard | Starter Spread Basic | Starter Spread Pro * | Superior * |
|--|----------|----------------------|----------------------|------------|
| hydraulic adjustment of the conveyor speed | + | + | + | + |
| electronic conveyor control from the cabin | - | + | + | + |
| box tailgate opening indicator | - | - | + | + |
| precise setting of the fertiliser dose in m ³ /ha or t/ha | - | - | + | + |
| maintaining the dose regardless of the travel speed | - | - | - | + |
| computer-based operation of hydraulic functions | - | - | - | + |

*available models: Apollo Premium 11-16



Manual oil flow controller

Is used to precisely adjust the speed of the floor conveyor. It is located above the drawbar in a well accessible place.



Hydraulic oil filter

Comes with the electronic oil flow controller. It guarantees failure-free and precise operation, even in difficult conditions.

Tailgate opening indicator

Is supplied with the Starter Spread and Superior controller and is used for precise setting of the fertiliser dose.



CONTROL ADAPTED TO YOUR NEEDS

The control of the machine operating parameters and the possibility of precise calibration of the spreader are key to achieving maximum efficiency and comfort of work. **UNIA** offers a wide range of controllers so that you can decide which method of machine operation is the most convenient for you.



ISOBUS + GFX-750

- Touch display GFX-750 (10")
- Android system
- NAV-500 antenna (accuracy 15-30 cm)
- Control of hydraulic functions of the machine
- Extensive expandability of functions
- Calibration function
- Possibility to connect a camera
- VT / ISO Task Control – automatic sectioning
- Variable dosing – VRA
- Fertilizer presence control
- Reports on the work carried out



ISOBUS + GFX-350

- Touch display GFX-350 (10")
- Android system
- NAV-500 antenna (accuracy 15-30 cm)
- Control of hydraulic functions of the machine
- Extensive expandability of functions
- Calibration function
- Possibility to connect a camera
- VT / ISO Task Control – automatic sectioning
- Variable dosing – VRA
- Fertilizer presence control
- Reports on the work carried out



ISOBUS (no terminal)

- Control module
- Maintaining the set dose regardless of driving speed
- Calibration function
- Control of hydraulic functions of the machine
- ISOBUS socket on the machine side
- Control via tractor terminal or terminal Trimble
- Fertilizer presence control
- Control of the dosing rate
- Checking of rotation speed of the spinner discs






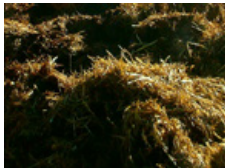

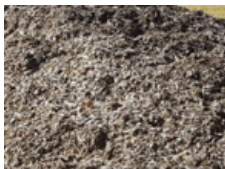
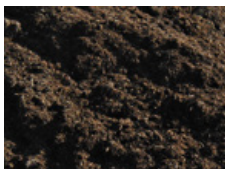


HEART OF THE SPREADER

The adapter is a key working element of the spreader. The quality of work depends mainly on the operation of the adapter. Due to a huge variety of fertilisers distributed by the spreader, various types of adapters have been developed to ensure the right shredding and spreading effect. The adapter can be quickly changed to adapt the Apollo Premium spreader to fertilisation with different types of manure and to transport of bulk material.

Adapter selection

Proper grinding and mixing with soil during cultivation operations is a key parameter that guarantees even distribution of the fertiliser on the field surface, even at low doses. This leads to a rapid breakdown of organic matter and ensures good use of nutrients by plants.

Various fertiliser properties require a well-thought-out selection of adapter. The Tytan Premium spreader adapters are universal. They can be used for many different types of fertilisers, but the right choice gives the best possible result.

| SELECTION OF THE ADAPTER TYPE |  |  |  |
|--|--|--|--|
| | 2-shaft vertical adapter | Horizontal adapter + disc | Shredding adapter + disc |
|  | Fresh manure ++ | — | — |
|  | Dry manure +++ | ++ | + |
|  | Chicken manure ++ | +++ | ++ |
|  | Compost, peat ++ | +++ | +++ |
|  | Lime ++ | +++ | +++ |
|  | Sludge + | ++ | +++ |
| — not recommended + acceptable | | | |
| ++ good +++ very good | | | |



Application

Universal adapter, perfect for spreading different types of manure and suitable for liming.

Working width:
8-12 m

2-shaft vertical adapter

Two vertical, spiral shafts equipped with exchangeable tines and blades made of Hardox steel intensively tear up the manure and spread it to a width of up to 12 m. High throughput and aggressive operation make this type of adapter especially suitable for working with manure, even if it contains a large amount of straw placing high demands on the adapter. The 2-shaft vertical adapter can also be used for other fertilisers, such as compost, chicken manure and lime. Fertilisers that are easy to spread are scattered by means of the discs located in the lower part of the shafts which scatter the material exiting the lower part of the trailer box.

The 2-shaft vertical adapter is usually used by owners of cattle farms which use cattle manure which is difficult to process. To increase the use of the spreader during the season, the adapter can also be used for liming.



Operating elements

Replaceable elements made of Hardox steel are characterized by high resistance to damage and wear.



Powerful drive

Durable adapter gears are additionally protected by an overload and one-way clutch.



Application

Perfect for fertilising with lime, peat, compost and other materials that require high precision of shredding and spreading.

Working width:

12-24 m

2-shaft horizontal + spinner disc adapter

Two horizontal adapter shafts scarify and shred the material, which falls onto the sowing discs. The tailgate is hydraulically raised for inspection purposes, but during operation, it is in the lowered position and directs the fertiliser to the discs. The lower part of the tailgate is hinged, which prevents the formation of blockage at higher doses of fertiliser.

The advantage of the horizontal adapter is that it precisely shreds the mass and operates at a large working width, which makes it perfect for fertilising with lime, peat, compost and other easily shredded fertilisers. It is not recommended for straw and fresh cattle manure.

The horizontal adapter is chosen by farmers who prefer liming with a spreader and those who use loose natural fertilisers, especially in smaller doses which require the highest precision of spreading.



Horizontal shafts

Spiral shafts equipped with exchangeable fingers shred the fertiliser which is then transferred to the discs.



Spinner discs

Large-diameter discs with adjustable blades spread the shredded fertiliser evenly over a considerable width.



Application

Simple design ensures intensive and even material shredding, perfect for lime.

Working width:
12-24 m

Shredding + spinner disc adapter

A single horizontal shaft equipped with a set of hammers suspended on chains is the component responsible for shredding the material. It is enclosed in a rigid housing and spins at a high speed ensuring smooth collection and very precise shredding of the fertiliser. The shredded material is transferred to the spinner discs and evenly spread over a large width.

Precise shredding of the material is particularly important if lime and other loose materials, such as compost or peat, are used for fertilisation. It allows to achieve a uniform spreading even at low doses. Its other assets are simple design and moderate price.

The shredder can be a perfect supplement to the vertical adapter on farms which use the spreader for a variety of tasks, both for manure fertilisation and fertilisation with lime or sludge from a biogas plant.



Flail adapter

Chain-mounted hammers moving at high speed intensively crush the material and protect the drive against shock.



Simple design

One horizontal large-diameter shaft means fewer gears, lower purchase price and simpler operation.

ADDITIONAL EQUIPMENT

With a wide range of optional components, Apollo Premium spreaders can be adapted to the individual needs of each farm.

Capacity attachment

Ensures efficient transport of bulk materials, e.g. chopped grass and corn to the silo. Requires disassembly of the adapter and the box tailgate.



Hydraulic tailgate

Prevents the manure from falling down on the adapter shaft so that it is easier to start it. Ensures optimal filling of the box with manure without spillage and evenly starts the spreading.



Cover of the vertical adapter

Hydraulically raised. Secures the adapter during transport. In some countries, it is required by law.



Hydraulic deflectors for the vertical adapter

Operated in a convenient way directly from the tractor cab. They also act as a cover of the vertical adapter during transport.



Mechanical deflectors for the vertical adapter

Simple and effective solution to limit the spreading width at the edge of the field.



Deflectors for the horizontal adapter

Mechanically adjustable. They limit the width of the manure or lime spread through the sowing discs, e.g. at the edge of the field.

Hydraulic support foot

Ensure safer and more comfortable machine disconnecting after work.



Wheel mudguards

Protect the machine and the tractor from soil contamination and manure that breaks away from the protector while driving.



APOLLO PREMIUM

STANDARD EQUIPMENT:

- 2-chain floor conveyor (1 pair of bars), the thickness of the cell $\varnothing 14$ mm [APOLLO 8÷13 PREMIUM]
- 4-chain floor conveyor (2 pairs of bars) the thickness of the cell $\varnothing 14$ mm [APOLLO 14÷16 PREMIUM]
- trailer box tailgate
- hydraulic, variable control of the floor conveyor
- adapter 1,8 m wide [APOLLO 8÷10 PREMIUM]
- adapter 2 m wide [APOLLO 11÷16 PREMIUM]
- sprung bottom drawbar on a longitudinal leaf spring
- mechanically adjustable drawbar support
- 2-line air brake system
- handbrake
- lighting installation
- wide angle PTO shaft (830 Nm L. nom 1110 mm.)

Technical Data APOLLO PREMIUM

| APOLLO PREMIUM | 8 | 10 | 11 | 13 | 14 | 16 |
|---|-------------------------|-------------------------|-------------------------|--------------------|-------------------------|-------------------------|
| Nominal load capacity [t] | 6,5 | 8 | 9 | 10 | 11 | 13 |
| Load capacity on field [t] | 9 | 11 | 12 | 13 | 14 | 16 |
| Box capacity [m3] | 7,5+3 | 10+3 | 11+3 | 12+3,5 | 14+3,5 | 16,5+3,5 |
| Overall dimensions: length/width/height [m] | 7,30 / 2,77 / 2,70 | 7,00 / 2,77 / 2,95 | 8,00 / 2,80 / 3,00 | 8,05 / 2,80 / 3,20 | 8,60 / 3,09 / 3,00 | 8,60 / 2,93 / 3,20 |
| Loading height [m] | 2,4 | 2,65 | 2,55 | 3 | 2,6 | 3 |
| Box dimensions: length/width/height [m] | 4,34 / 1,46-1,96 / 1,18 | 4,34 / 1,46-1,96 / 1,37 | 5,16 / 1,50-2,30 / 1,40 | 5,16 / 1,53 / 1,70 | 5,68 / 1,50-2,30 / 1,40 | 5,68 / 1,50-2,30 / 1,75 |
| Number of conveyors | 1 | 1 | 1 | 1 | 2 | 2 |
| Adapter width [m] | 1,8 | 1,8 | 2 | 2 | 2 | 2 |
| PTO revolutions | 540 | 540 | 540 | 540 | 1000 | 1000 |
| Total weight [kg] | 4100 | 4200 | 4500 | 4800 | 5730 | 5880 |
| Power demand [HP] | 80 | 90 | 80-100 | 80-120 | 100-120 | 120-150 |
| Tyres (standard) | 18,4x34 | 18,4x38 | 23,1-26 | 580/70 R38 | 580/70 R38 | 650/75 R32 |



Field tests

Together with industry specialists and research centres, the spreaders are precisely tested against the uniformity of the fertiliser spread, rolling resistance, energy loads in the drive system, fuel consumption as well as axle and drawbar loads.



APOLLO PREMIUM

ACCESSORIES AT EXTRA CHARGE:

- horizontal adapter + spinner disc
- shredding + disc adapter
- mechanic deflector for 2-shaft vertical adapter
- hydraulic deflector – tilting for 2-shaft vertical adapter
- mechanic deflector for horizontal /shredding adapter
- lime attachment with a table for a 2-shaft vertical adapter [APOLLO 11÷16 PREMIUM]
- rear cover of the vertical adapter
- capacity attachment [APOLLO 11÷16 PREMIUM]
- RBS distributor
- Controller Starter Spread Basic
- Controller Starter Spread pro (set) [APOLLO 11÷16 PREMIUM]
- SUPERIOR computer [APOLLO 11÷16 PREMIUM]
- ISOBUS control and variable application rate (GFX-750 panel, NAV 500 receiver, VRA) [APOLLO 11÷16 PREMIUM]
- ISOBUS control and variable application rate (GFX-350 panel, NAV 500 receiver, VRA) [APOLLO 11÷16 PREMIUM]
- ISOBUS control (without: monitor, navigation, variable rate) [APOLLO 11÷16 PREMIUM]
- hydraulic support
- ball hitch K80
- wheels mudguards
- hydraulic brake system (no EU 167/2013 homologation)
- resignation from EU 167/2013 homologation
- other wheels options available on UNIA ordering portal



QUALITY

Based on many years of experience in the production of agricultural machinery, UNIA specialists developed highly advanced production technologies that guarantee the highest quality in machines designed for working in difficult conditions. Manure spreaders exposed to aggressive substances corrosive to metal require special care in the process of applying the paint coating and at the stage of preparing steel for painting. That is why Apollo Premium spreaders use painting processes adapted to the work needs and conditions, and steel preparation technologies that guarantee the strong bonding of the corrosion protection layer and the painted surface.



Modern assembly line

The assembly is carried out in accordance with the highest standards provided for machines working in difficult conditions..



Surface preparation

The powder coating is preceded by shot blasting to achieve a matt surface and ensure that the coat of paint can adhere to it perfectly.





Powder coating

A modern powder paint shop was created to provide the highest quality paint coating.

After application, electrostatically charged powder particles adhere perfectly to metal surfaces. Then the painted elements are baked at the right temperature guaranteeing the formation of a coating resistant to external factors and mechanical damage.

The frame and box are spray painted. In this case, two layers are applied: a primer layer and the main coat of paint.

Green dust-free painting

Modern painting chambers prevent harmful substances from getting into the environment. Powder that does not settle on the painted parts is recovered.



UNIA Sp. z o.o.

ul. Szosa Toruńska 32/38, 86-300 GRUDZIĄDZ
export@uniamachines.com

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uniamachines.com