

ENG



UNIA



IBIS

MOUNTED REVERSIBLE PLOUGHS



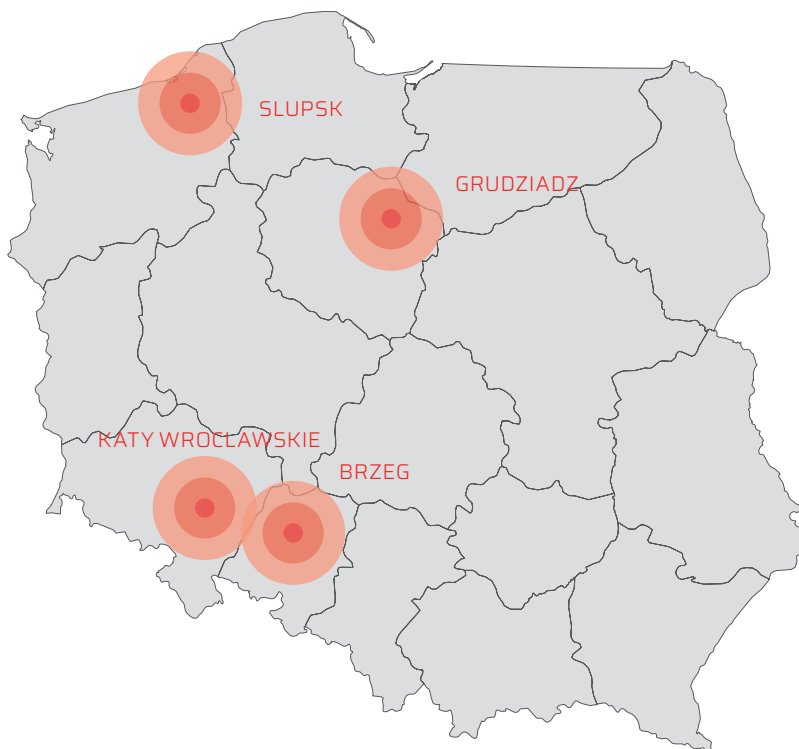
UNIA Sp. z o.o. is a Polish manufacturer of the widest, most comprehensive range of agricultural products in Europe.

We have 4 modern factories with world-class production equipment, and our history and expertise date back more than 140 years. It was at our factory that the first cultivator and rotary plough were made.

Through dedicated business partners, our products are sent to farmers in more than 60 countries in the world, on every continent.

Thanks to our expertise, we offer our clients modern machines as well as the best agronomic solutions used in the most demanding global markets.

We offer a comprehensive range of agricultural equipment: farming machinery – from ploughs and cultivation units, seed drills and combination seed drills, distributors and spreaders, balers and wrappers, sprayers and potato harvesters to grain storage technologies.



4

PRODUCTION
PLANTS

11.5 ha

OF PRODUCTION
AREA

1200

EMPLOYEES

700

OFFERED
PRODUCTS

60

SALES
MARKETS



uniagroup.com

IT ALL STARTED WITH A PLOUGH

140 YEARS OF EXPERIENCE

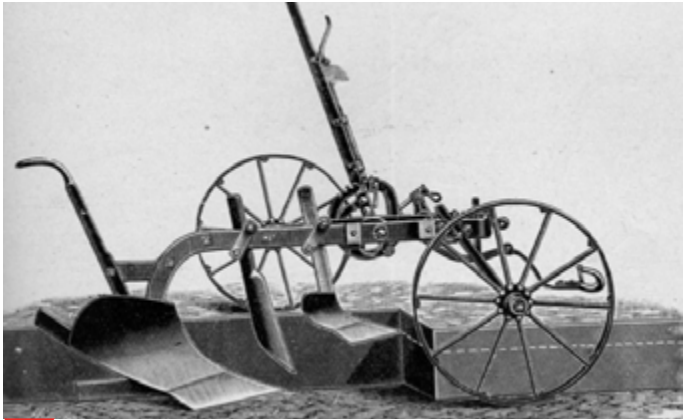


Having arrived in Grudziądz in 1882, the young engineer set up a small craft workshop to repair agricultural equipment with two of his employees.

After some time, following complaints from local farmers about the low quality of agricultural tools, especially ploughs, **August Ventzki** designed and built his own plough, which quickly gained recognition among users.

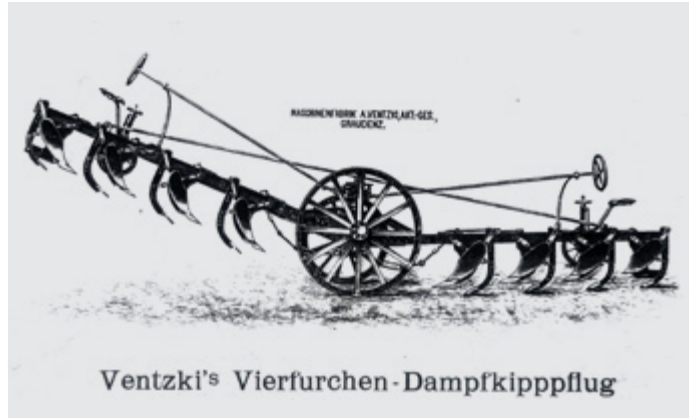
That was the beginning of the history of the **Unia** brand.





„WINNER”

Ventzki became known throughout the continent for his single-furrow plough, A.V.G 273, the “Winner,” a name given to it following its ploughing competition win at Rothehaus in Westphalia



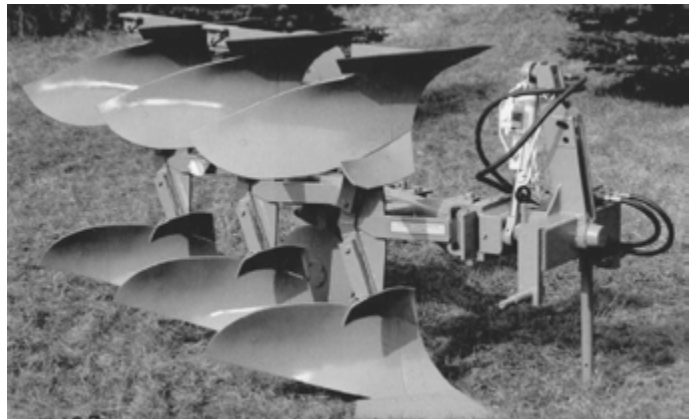
WINCH PLOUGH

It was designed to work with two steam engines. The plough was pulled to opposite ends of the field by a system of steel cables. The machine increased the efficiency of cultivation in large-area farms.



PZO-1

The first tractor-mounted reversible plough manufactured at Fabryka Maszyn Rolniczych “Unia” Grudziądz [Unia Grudziądz Agricultural Machine Factory]. It was presented in 1961 at the Agricultural Exhibition on the occasion of the Central Harvest Festival. The working width of the plough was 40 centimetres and the maximum ploughing depth was 30 centimetres. The plough was designed for ploughing on mountainous areas and foothills. It was intended to work with the URSUS C-325 tractor.



FIRST IBIS

The AGROMET-UNIA factory released the machine at the end of the 1980s. U126 and U127 models had a fixed working width of 35 centimetres per body and a low power demand.

IBIS

ANOTHER NAME FOR REVERSIBLE PLOUGH

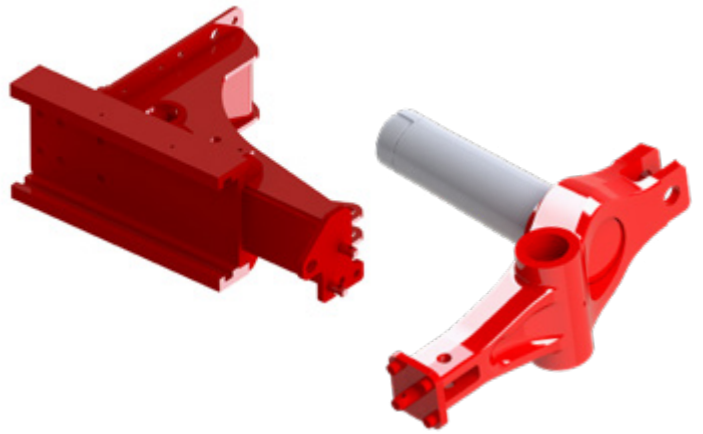
Creating ploughs that are reliable and adapted to increasingly difficult conditions and requirements has been our aim for years. At present, IBIS comprises 5 plough models suitable for both family farms and large-area enterprises.

Our long experience allows us to create fully innovative ploughs that make hard work a pleasure with profits.





PANTOGRAPH OR SLIDER

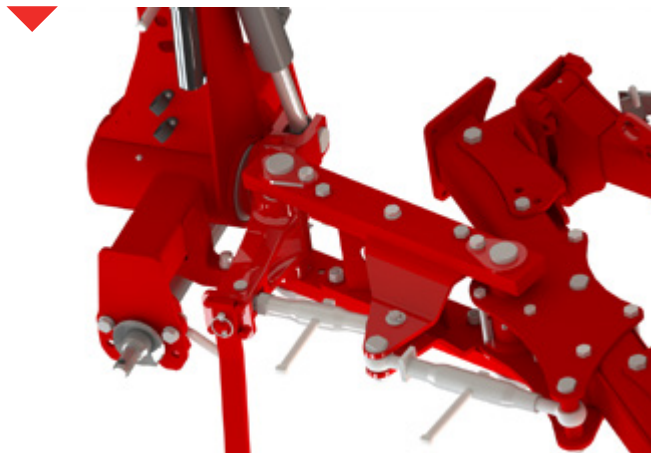


**THE ELEMENTS THAT CONNECT THE FRAME WITH
THE AXLE ARE FORMED DURING FORGING.**

Depending on the model, the plough is fitted with a pantograph or slider.

THE PANTOGRAPH

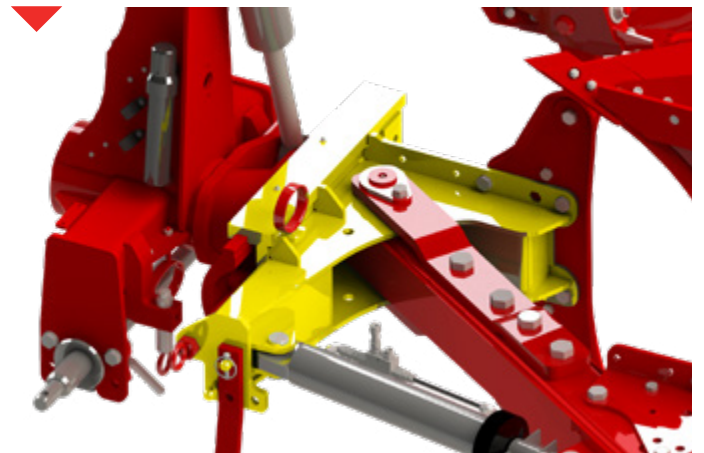
moves the centre of gravity closer to the rear axle of the tractor so that the ploughs can be combined with small and low-power tractors. It is used in IBIS M and L..



SLIDER

It increases the service life of the frame connection system. The rail connecting the frame with the turntable is made of cast steel. It is used in IBIS XM, XXL, and VARIO.

UNIA ploughs equipped with the pantograph can be fitted with a transport and support wheel.

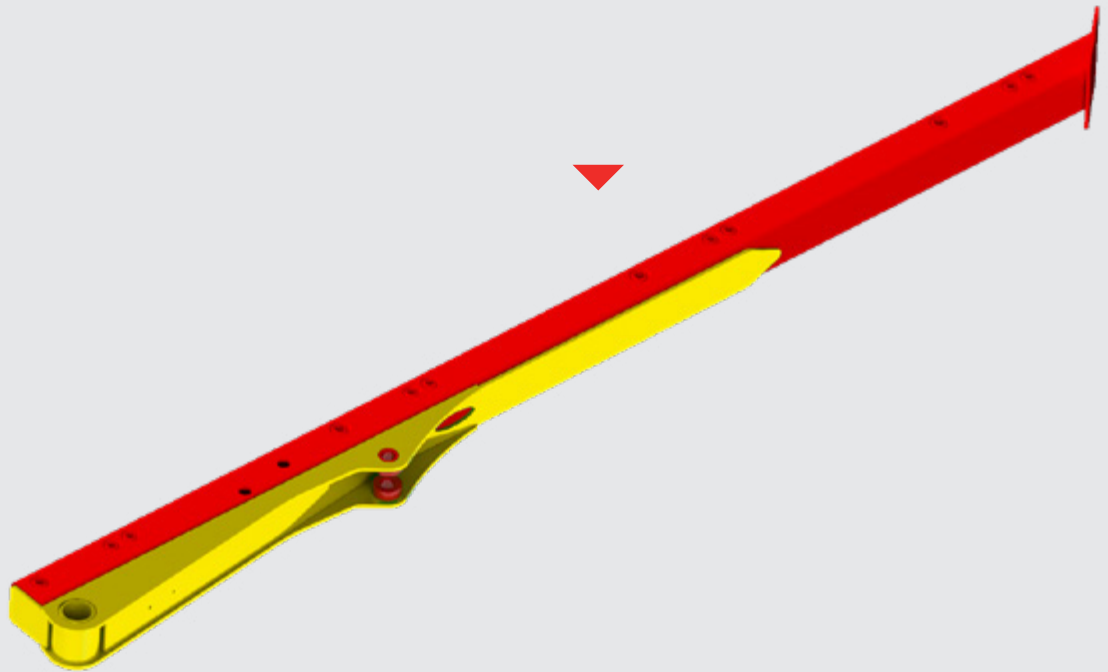


FRAME DESIGN THOUGHT THROUGH TO THE LAST DETAIL

The frame is the most important structural element of every plough.

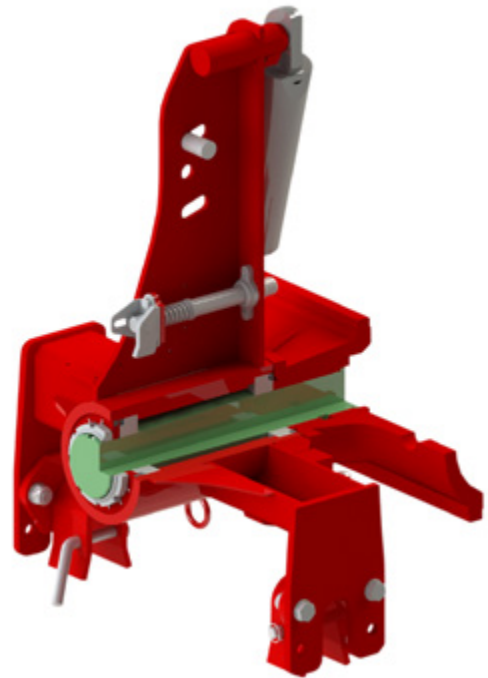
UNIA has refined it to the smallest detail. The precise strength tests helped to identify sections of the frame that carry the heaviest loads during operation.

The sections were additionally reinforced. Each part of the frame is designed to carry different loads in the field.



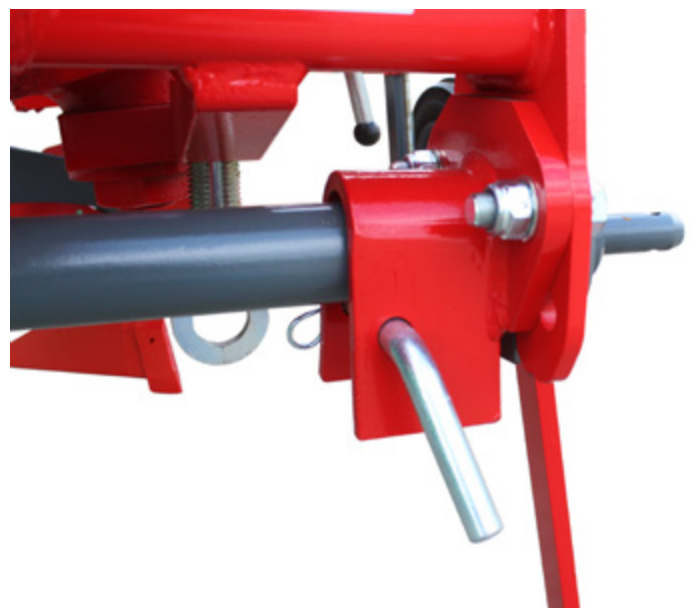
ROBUST PIVOT

The axles of turntables are cone-shaped and have tapered roller bearings of two different sizes. Each plough model has a corresponding diameter and bearing type assigned. The solution is simple and convenient in everyday use. If there is any play in the bearings, it can be easily compensated by tightening the bearing nut.

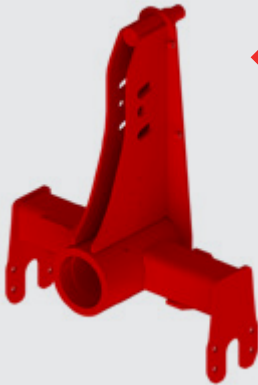


SUSPENSION AXLE - QUICK COUPLER

It helps to connect a plough with a tractor and can be quickly unhitched from a plough head and suspended on three-point hitch arms. The beam has a two-stage adjustment for connecting the machine with older tractors which do not lift the arms high enough. The suspension axle is universal and can be used in other UNIA machines.



HEAD ADAPTED TO THE MODEL



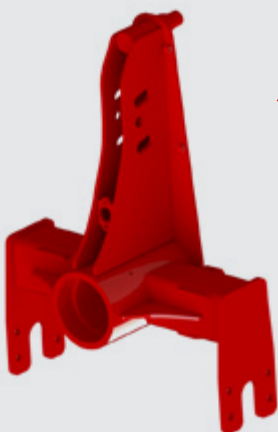
HEAD "110"

- Axle diameter [mm]: 110
- Used in the following models: M 2+, L 3+
- Maximum tractor power [HP]: 110



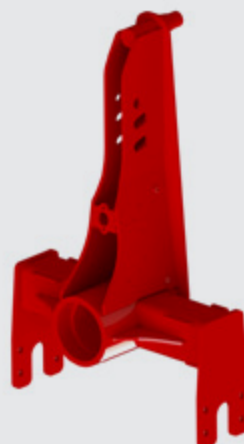
HEAD „110 II"

- Axle diameter [mm]: 110
- Used in the following models: XM 3+, VARIO 4
- Maximum tractor power [HP]: 170



HEAD „120"

- Axle diameter [mm]: 120
- Used in the following models: XM 4+, L 4+
- Maximum tractor power [HP]: 180



HEAD „120 II"

- Axle diameter [mm]: 120
- Used in the following models: XXL 3+, 4+, VARIO 5
- Maximum tractor power [HP]: 220

ROBUST

IN ALL CONDITIONS

Mouldboard is the main element that determines the quality of ploughing. The parameters that determine its working results are the ratio of a working width to a plough depth and the Inversion angle the furrow-slice. As the soil moves across the surface of the mouldboard's share, breast, and wing, it is stretched on one side (by the share), and crushed on the other side (by the friction and resistance of the breast). This makes the material disintegrated and crushed. The force with which the material is compressed and stretched (crushed in practice) depends on the shape of the mouldboard and the resistance it applies when moving over the material.

FULL CONTROL OF THE TECHNOLOGICAL PROCESS

GUARANTEES THE HIGHEST QUALITY OF WORKMANSHIP OF WORKING PARTS

LONG MOULDBOARD

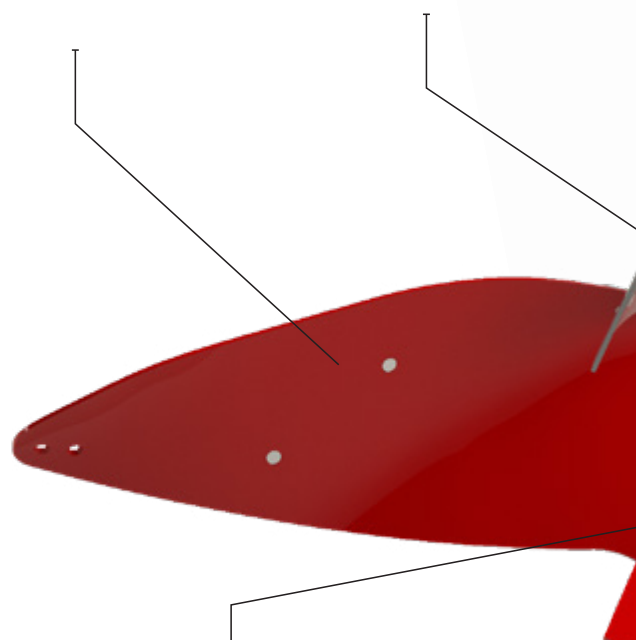
with holes for attaching additional extension bars to guarantee the highest quality of coverage of crop residues and reduce the resistance during work to a minimum

FURROW-SLICE TRASHBOARD

The correct positioning adjusted to the working depth of the bodies has a great influence on the quality of ploughing.

ADAPTER

A universal adapter that exerts pressure on the furrow wall. Perpendicularity of the adapter to the soil ensures correct operation of the entire body



DOUBLE-SIDED CHISEL

The double-sided forged chisel with the additional extension of plough share improves the quality of body penetration, even in difficult conditions. If reversed at the right time, it enhances its wear properties.

BORIC STEEL

appropriate elemental composition

HARD SURFACE ON BOTH SIDES

for less wear and a longer service life

SHAPED PLOUGH SHARE

The specially shaped and optimally angled plough share ensures the proper cut of the soil

WELDED PLOUGH SHARE

It consists of two different parts with very good wear properties.

ADDITIONAL OPENING

longer service life

LONG PLOUGH SHARE

with reversible chisel



LONG

BODY

LONG is a universal body designed to work on all soil types. The long but low mouldboard ensures good placement of the furrow-slice and covering of organic matter.

WIDE FURROW

The LONG body turns the furrow-slice perfectly, creating a very wide furrow bottom that is perfect for wide tractor tyres.

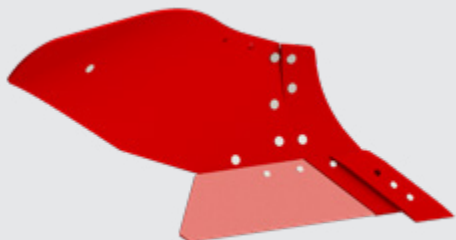


LONG BODY

The specially shaped mouldboard ensures low resistance during work. The pulling demand in optimal conditions is only 20 horsepower per body. The furrow-slice clearance causes it to crumble. The pre-crumbled field surface is easier to cultivate and saves time and energy.



KORPUSY UNIA



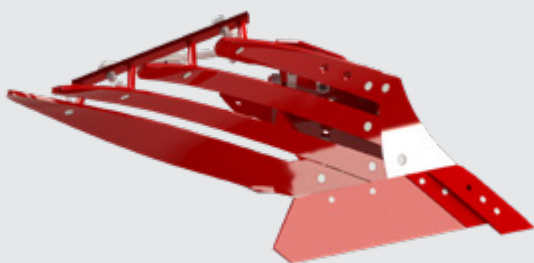
MX BODY

- For shallow to medium ploughing
- For light to medium soils
- Ploughing depth: up to 25 centimetres
- Working width: from 32 to 42 centimetres



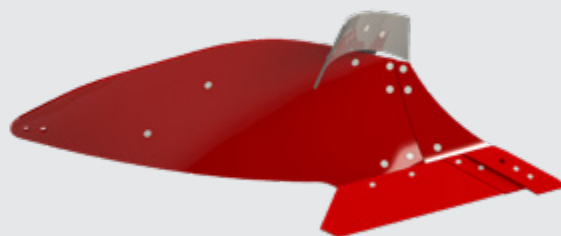
ZX BODY

- For deep ploughing on heavy soils
- Good furrow clearance and coverage of crop residues
- Ploughing depth: from 15 to 35 centimetres
- Working width: from 35 to 50 centimetres



SLATTED BODY

- LONG body shape
- Suitable for ploughing heavy, sticky, and compact soils
- Ploughing depth: from 10 to 28 centimetres
- Working width: from 35 to 45 centimetres



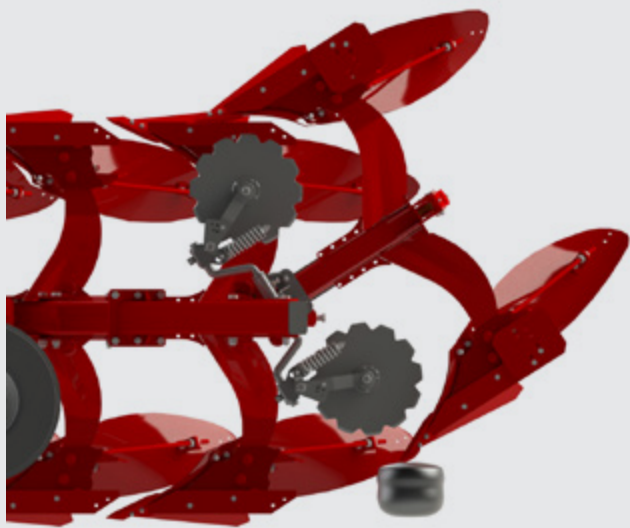
BIG LONG BODY

- Universal mouldboard for deep ploughing
- Low power demand
- Good furrow clearance and coverage of crop residues
- Working depth: from 15 to 35 centimetres
- Working width: from 35 to 55 centimetres

SPRING

PROTECTION

The spring protection is perfect for stony fields. The plough body rises every time the plough hits an obstacle. The plough body automatically returns to the pre-set ploughing depth after passing the obstacle.



SPRING LEAVES

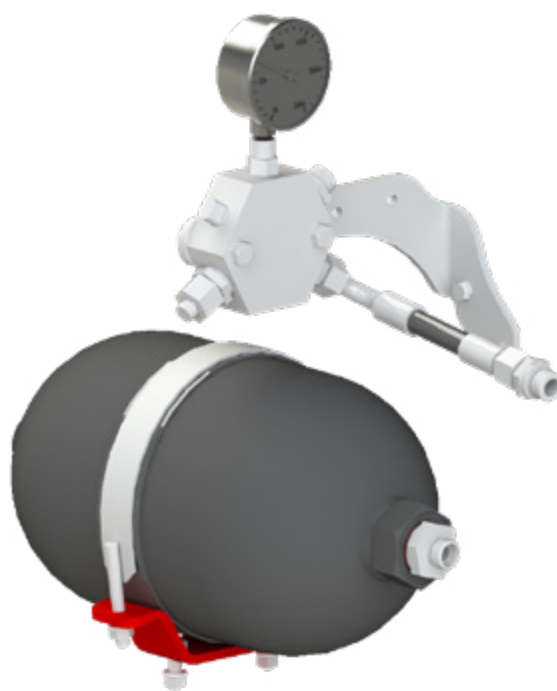
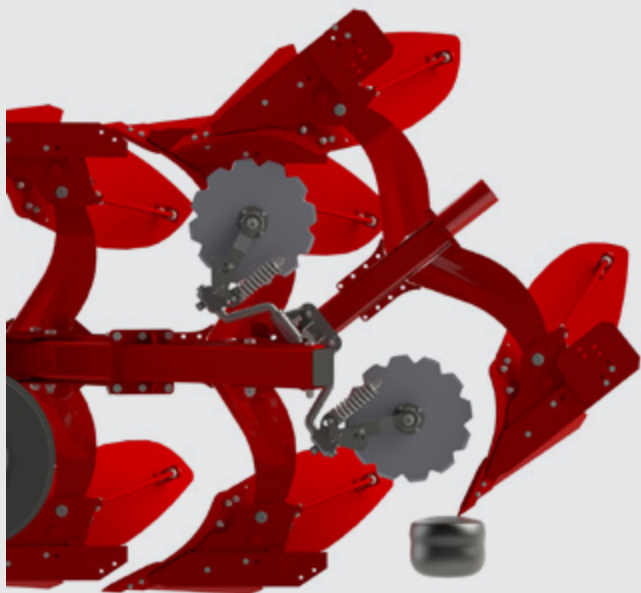
IBIS L and XM are equipped with 5 spring leaves as standard and the body release force is 750 kilograms. This works well on light soils. For heavier soils, the plough can be retrofitted with two additional leaves. In larger ploughs, such as XXL and VARIO, there are 7 spring leaves as standard with the release force up to 900 kg. As in the case of smaller ploughs, the number of leaves can be increased by two to 9, which gives the release force of 1,050 kilograms.



HYDRAULIC

PROTECTION

Hydraulic protection is the solution for farmers with highly variable conditions in their fields. By varying the strength of the protection, the plough can be easily adapted to the amount of stones and soil in the field.



HYDRAULICS FOR EVERY SOIL

The resistance at which the stone protection is released can be easily adjusted using the tractor's external hydraulics.

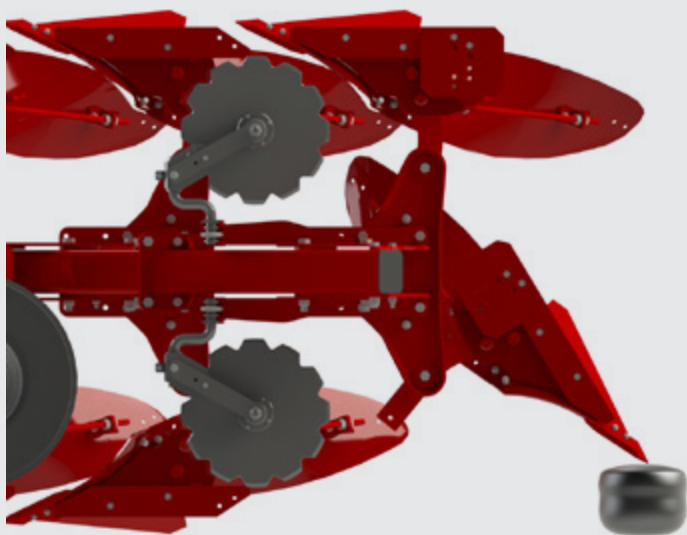
On light soils, a lower pressure is used to cause the system to operate gently and pull fewer stones to the surface. On heavier soils, higher pressure is required to prevent the plough bodies from being released from their locking position under the influence of the soil resistance.

The force of the protection is adjustable in the range.



BOLT PROTECTION

A large number of UNIA ploughs operate in non-stony fields where spring or hydraulic protection is not needed. The bolt protection is the perfect solution for such conditions.



◀ FUSES

The bolt protection allows the plough to be used inexpensively on heavy and non-stony soils. The bolt breaking force is as high as 1,750 kilograms at the chisel end. The maintenance costs of this type of protection are relatively low.



ACCESSORIES

Accessories for UNIA ploughs increase productivity and improve work results. There are a number of settings that can be used to adjust the components to the conditions in the field. The well-thought-out design facilitates service work.



TRASHBOARDS

The trashboards evenly distribute the organic matter to be covered with soil by the plough body.

The trashboard is fully adjustable. It can be set in up-down and forward-reverse direction.

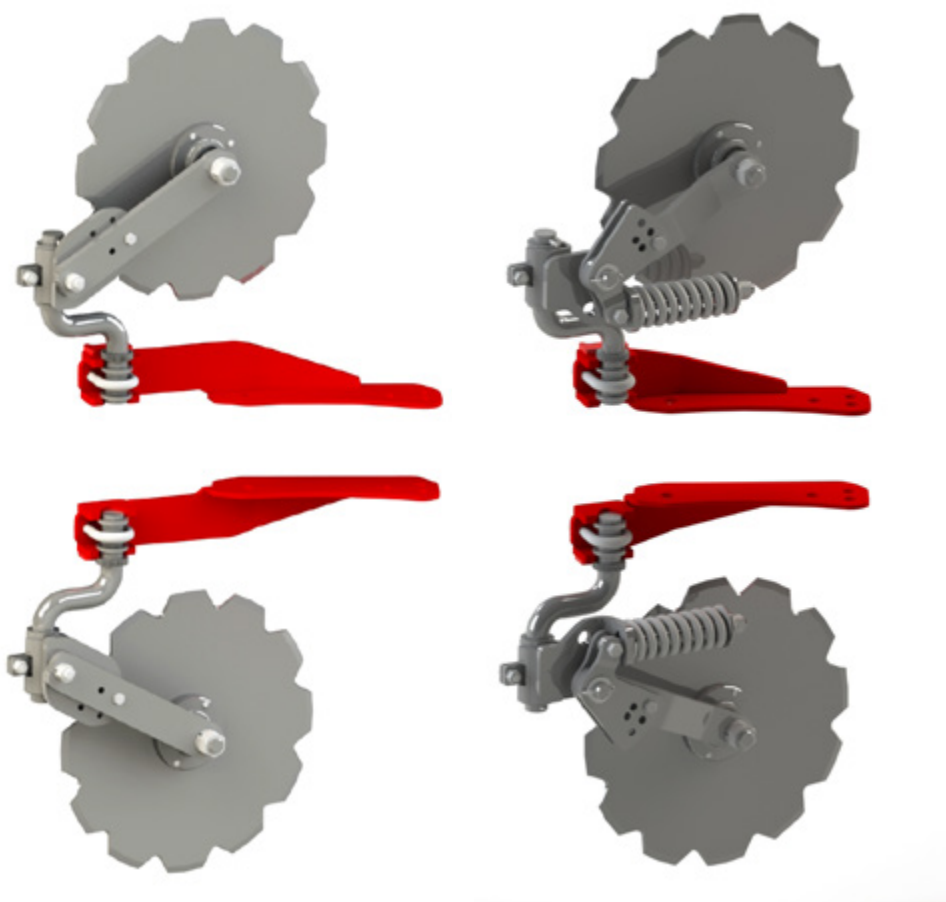


SKIM COULTERS

Skim coulters place crop residues at the bottom of the furrow so that they do not interfere with cultivation and sowing. Deep placement of corn stover is one of the most effective ways of controlling the European corn borer.

The inner edge of the skim coulter is rounded and streamlined to prevent the corn stalks from blocking.

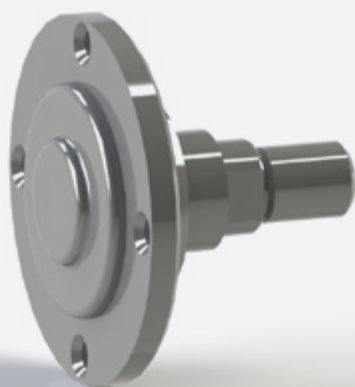
The UNIA skim coulter is fully adjustable and the plough share can be pulled forward as it wears out.



DISC COULTERS

The disc cuts the plants and soil before the last body. It creates a clean furrow wall and prevents plant residues from sliding to the bottom of the furrow. This improves traction of the tractor wheels.

The protection type depends on the plough body protection. A bolt is used in ploughs with bolt protection and a spring is used in ploughs with NON-STOP protection.



MAINTENANCE-FREE REPLACEMENT HUBS

All disc coulters are equipped with maintenance-free replaceable hubs. A fully integrated sealing system with bearings protects the hermetic hub from dirt, such as mud, straw, or fertiliser, getting inside. Thanks to the shape of the hub and the lack of protruding parts, the disc coulters are prevented from being blocked by straw or plants.

WHEEL

IN THE CENTRE OR AT THE BACK OF THE FRAME

IBIS ploughs can be fitted with support wheels in the centre of the frame or behind the last body.

XM and XXL can be fitted with side or rear support wheels.

Each wheel is cushioned. The rotation flows smoothly, without impact.

WHEEL SIZES:



200/60-14,5



10.0/80-12



320/60-12



SIDE SUPPORT WHEEL



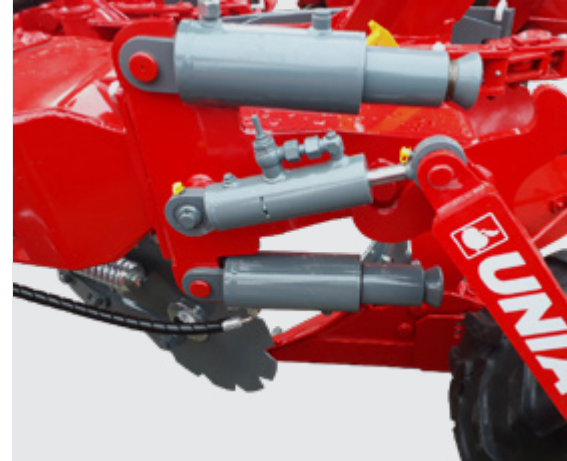
REAR SUPPORT WHEEL



SIDE SUPPORT AND TRANSPORT WHEEL



REAR SUPPORT AND TRANSPORT WHEEL



HYDRAULICALLY LOWERED REAR SUPPORT WHEEL

XM, XXL and VARIO models can be fitted with a hydraulically lowered rear support wheel. The wheel ensures maximum alignment of the starting and finishing line of ploughing at the headlands. When ploughing starts, the front part of the plough is lowered and then the remaining bodies are gradually lowered using the wheel. At the end of the drive, the process is reversed.

IBIS M

IBIS M is the smallest reversible plough in the UNIA range. The plough is fitted with two MX bodies as standard and the minimum power demand is only 50 HP. The extensive equipment and solutions used give the M model a strong position on the market.





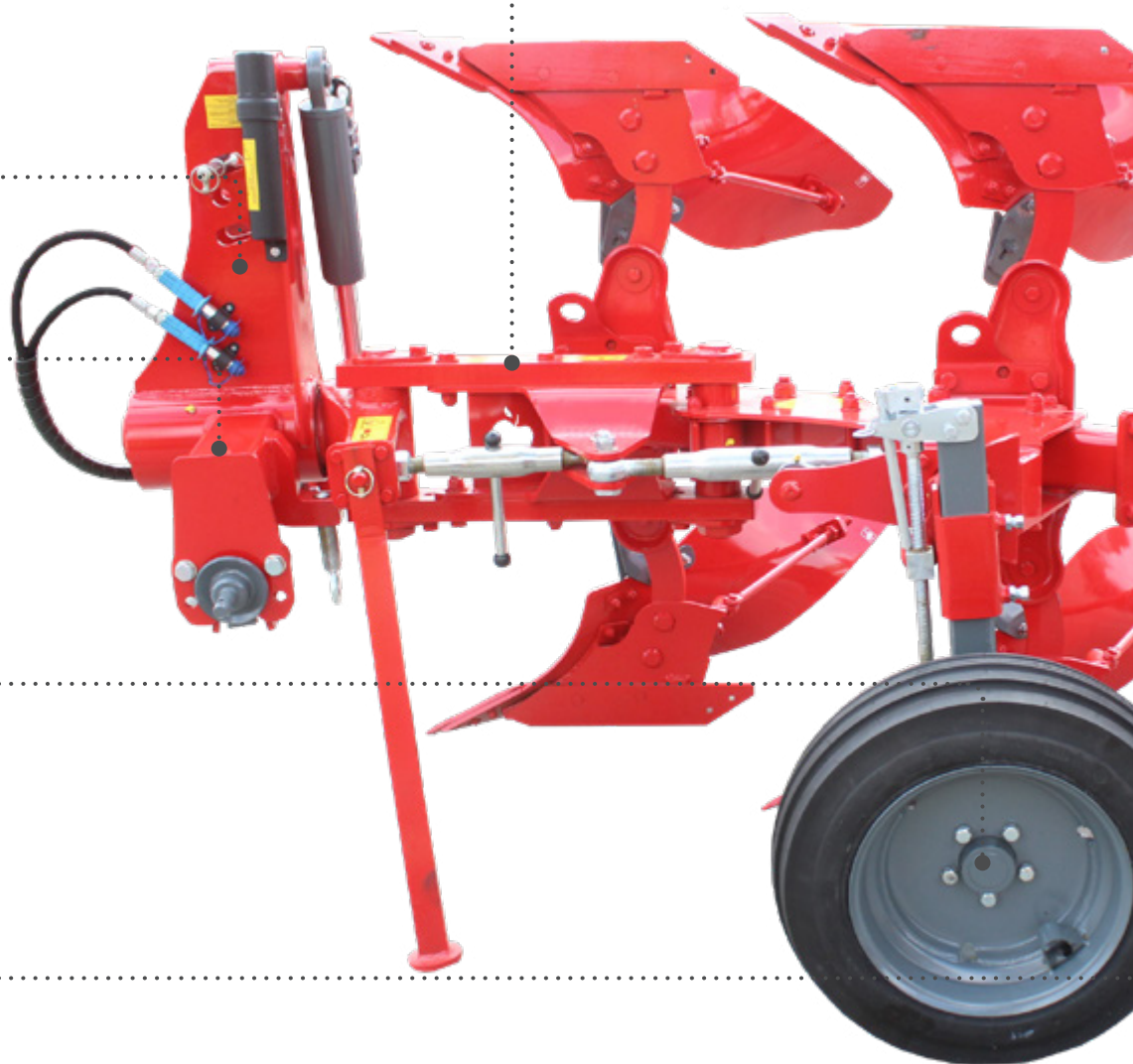
PANTOGRAPH

HEAD "110"

SUSPENSION
AXLE WITH TWO-
STAGE HEIGHT
ADJUSTMENT

SUPPORT WHEEL
WITH SHOCK ABSORBER

CAN BE USED WITH AN
ADDITIONAL BODY



IBIS M



TECHNICAL DATA



50-90 HP
power demand



100x100x8 mm
frame

32/37/42 cm



stepwise adjustment
of working width



85 cm
spacing between bodies



72 cm
underbeam clearance

IBIS M	2+	2+1
WEIGHT [kg]	600	750
POWER [HP]	50-70	70-90

IBIS L

The L model is the most popular plough in the UNIA range. It owes its popularity to its reliable design, high quality of work, and ability to operate with smaller tractors.





PANTOGRAPH

HEAD "110" - L 3+

HEAD "120" - L 4+

SUSPENSION
AXLE WITH TWO-
STAGE HEIGHT
ADJUSTMENT

SUPPORT WHEEL WITH
SHOCK ABSORBER

CAN BE USED WITH AN
ADDITIONAL BODY



IBIS L



TECHNICAL DATA



80-160 HP
power demand

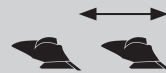


120x120x8 mm
frame

35/40/45 cm



stepwise adjustment
of working width



IBIS L: 90 cm
IBIS L PLUS: 100 cm
spacing between bodies



IBIS L: 75 cm
IBIS L PLUS: 80 cm
underbeam clearance

IBIS L	3+	3+1	4+	4+1
WEIGHT [kg]	990	1180	1190	1380
POWER [HP]	80-90	90-100	90-120	100-140

IBIS L	PLUS 3+	PLUS 3+1	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1080	1250	1270	1530
POWER [HP]	90-100	100-110	120-140	120-160

IBIS LS	3+	3+1	4+	4+1
WEIGHT [kg]	1120	1350	1370	1650
POWER [HP]	80-90	90-110	90-130	100-150

IBIS LS	PLUS 3+	PLUS 3+1	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1190	1420	1460	1800
POWER [HP]	100-110	110-120	120-150	120-160

IBIS XM

XM combines the lightweight design of the L plough with the robust connection between the pivot and the frame using the pivot rail. This significantly extends the service life and simplifies the plough setting process. XM can be retrofitted with a rear or side support wheel.





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CONNECTION BETWEEN THE HEADSTOCK
AND THE FRAME USING A SLIDER

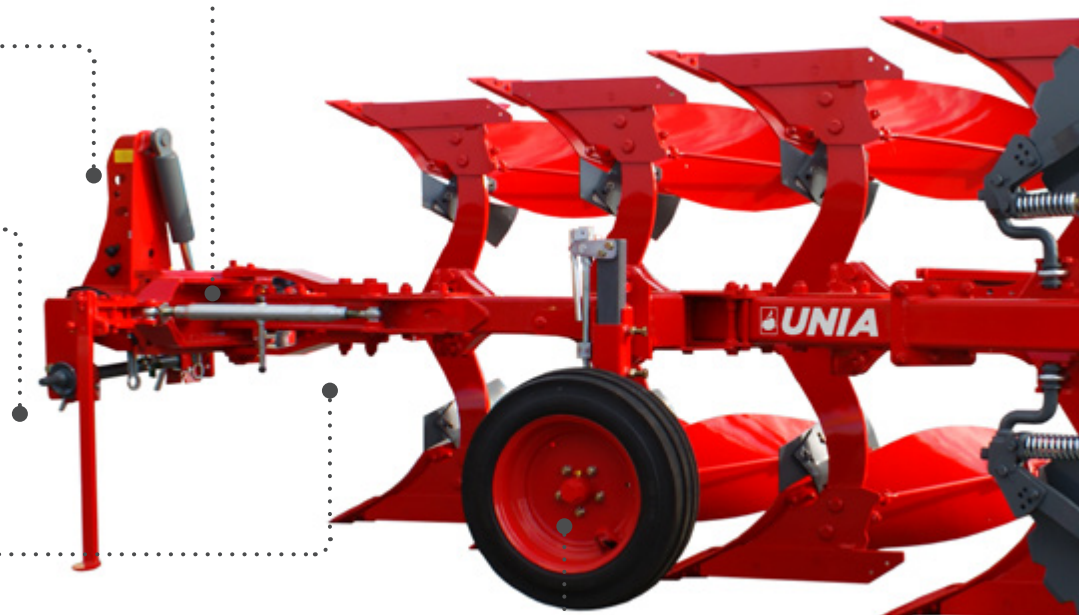
.....
HEAD "110" - XM 3+
HEAD "120" - XM 4+

.....
SUSPENSION
AXLE WITH TWO-
STAGE HEIGHT
ADJUSTMENT

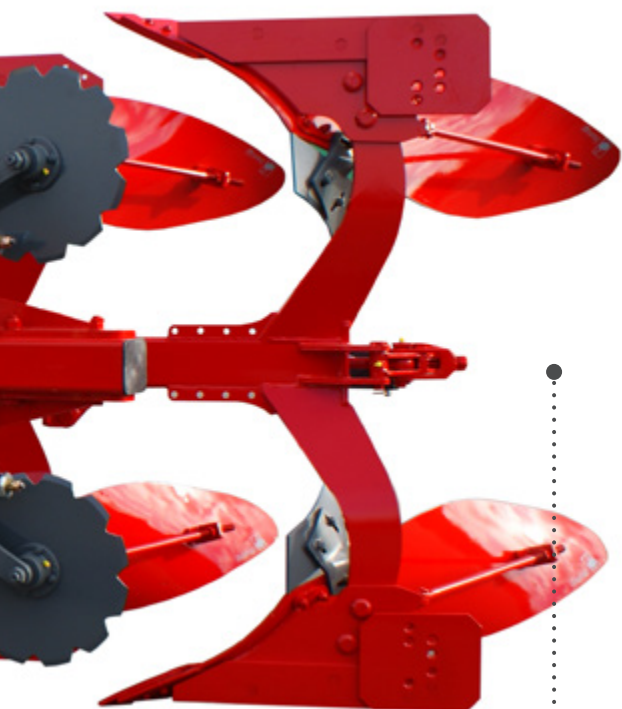
.....
SPINDLE OR CYLINDER OF
FRAME LEANING

.....
SUPPORT WHEEL OR SUPPORT AND TRANSPORT WHEEL
WITH SIDE OR REAR SHOCK ABSORBER

.....
CAN BE USED WITH AN ADDITIONAL BODY



IBIS XM



TECHNICAL DATA



90-180 HP
power demand

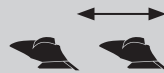


120x120x8 mm
frame

35/40/45 cm



stepwise adjustment
of working width



IBIS XM: 90 cm
IBIS XM PLUS: 100 cm
spacing between bodies



IBIS XM: 75 cm
IBIS XM PLUS: 80 cm
underbeam clearance

IBIS XM	3+	3+1	4+	4+1
WEIGHT [kg]	1140	1320	1340	1510
POWER [HP]	90-120	100-120	110-140	120-160

IBIS XM	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1400	1580
POWER [HP]	120-150	130-160

IBIS XXL

The XXL model will work well with high-powered tractors on the heaviest soils. The 140x140x8 mm frame has been additionally reinforced in places that carry the highest loads during ploughing.





CONNECTION BETWEEN THE HEADSTOCK
AND THE FRAME USING A SLIDER

SUSPENSION AXLE WITH
TWO-STAGE HEIGHT
ADJUSTMENT

HEAD "120 II"



SPINDLE OR CYLINDER
OF FRAME LEANING

IBIS XXL



.....

CAN BE USED WITH AN
ADDITIONAL BODY

.....

SUPPORT WHEEL OR SUPPORT AND
TRANSPORT WHEEL WITH SIDE OR
REAR SHOCK ABSORBER

TECHNICAL DATA



90-180 HP
power demand

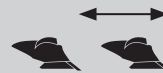


140x140x8 mm
frame

IBIS XXL: 36/43/50 cm
IBIS XXL PLUS: 44/48/55 cm



stepwise adjustment
of working width



IBIS XXL: 90 cm
IBIS XXL PLUS: 100 cm
spacing between bodies



IBIS XXL: 75-80 cm
IBIS XXL PLUS: 80-85 cm
underbeam clearance

IBIS XXL	3+	3+1	4+	4+1
WEIGHT [kg]	1180	1370	1390	1560
POWER [HP]	90-110	120-150	130-160	140-180

IBIS XXL	PLUS 3+	PLUS 3+1	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1290	1430	1450	1640
POWER [HP]	100-120	110-140	130-160	150-190

IBIS XXL S	3+	3+1	4+	4+1
WEIGHT [kg]	1400	1590	1600	1760
POWER [HP]	110-130	130-160	130-160	150-200

IBIS XXL S	PLUS 3+	PLUS 3+1	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1520	1690	1700	1880
POWER [HP]	120-140	140-170	140-170	160-210

IBIS XXL H	3+	3+1	4+	4+1
WEIGHT [kg]	1390	1570	1590	1750
POWER [HP]	110-130	130-160	130-160	150-200

IBIS XXL H	PLUS 3+	PLUS 3+1	PLUS 4+	PLUS 4+1
WEIGHT [kg]	1510	1680	1690	1870
POWER [HP]	120-140	140-170	140-170	160-220

IBIS VARIO

VARIO is the most advanced Unia's plough. Continuously adjustable ploughing width in the range between 35 and 50 centimetres per body. Hydraulic width adjustment allows for quick adaptation to changing field conditions and facilitates ploughing of fields with irregular shapes.





CONNECTION BETWEEN THE HEADSTOCK
AND THE FRAME USING A SLIDER

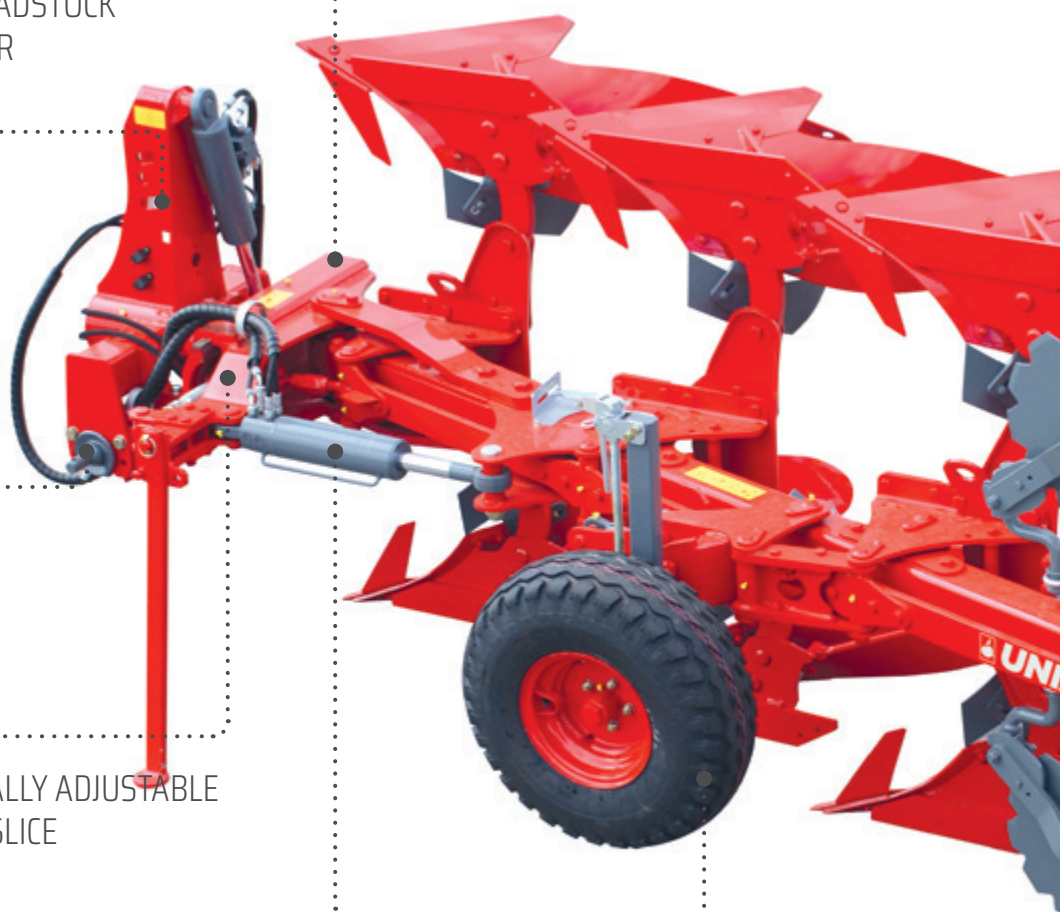
HEAD "110 II" - VARIO 4
HEAD "120 II" - VARIO 5

SUSPENSION AXLE WITH TWO-
STAGE HEIGHT ADJUSTMENT

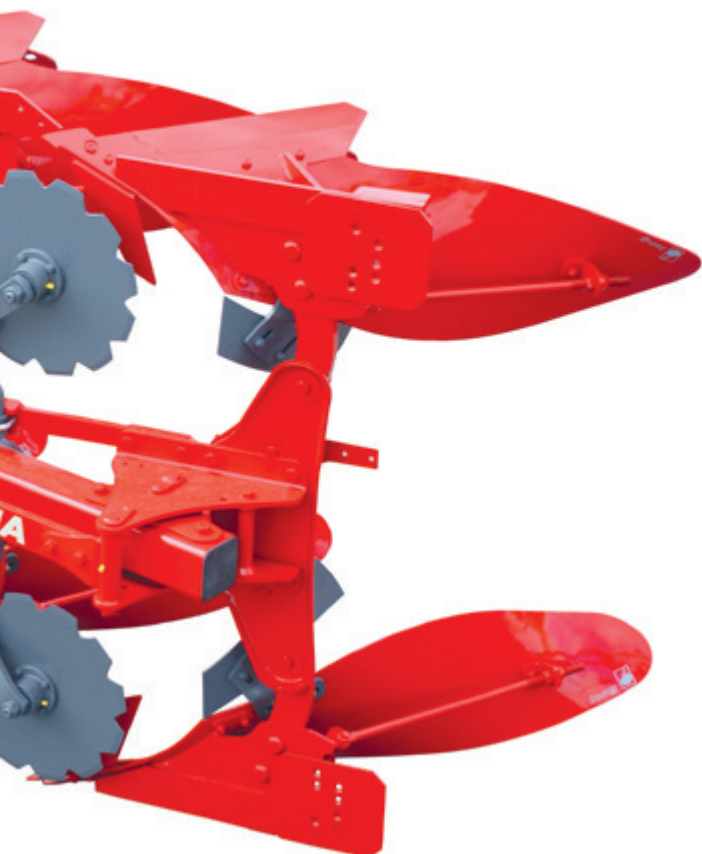
MECHANICALLY OR HYDRAULICALLY ADJUSTABLE
WIDTH OF THE FIRST FURROW-SLICE

SPINDLE OR CYLINDER OF FRAME LEANING

SUPPORT WHEEL OR SUPPORT AND TRANSPORT WHEEL
WITH SIDE OR REAR SHOCK ABSORBER



IBIS VARIO



TECHNICAL DATA



90-220 HP
power demand



VARIO 3,4: 120x120x8 mm
VARIO 5: 140x140x8 mm
frame

35-50 cm



hydraulic adjustment
of working width



IBIS VARIO: 90 cm
IBIS VARIO PLUS: 100 cm
spacing between bodies



IBIS VARIO: 75-80 cm
IBIS VARIO PLUS: 80-85 cm
underbeam clearance

IBIS VARIO	4	5
WEIGHT [kg]	1490	1790
POWER [HP]	120-160	140-180

IBIS VARIO	PLUS 4	PLUS 5
WEIGHT [kg]	1590	1970
POWER [HP]	130-160	150-200

IBIS VARIO S	4	5
WEIGHT [kg]	1700	2000
POWER [HP]	130-160	150-200

IBIS VARIO S	PLUS3	PLUS 3
WEIGHT [kg]	1790	2180
POWER [HP]	140-170	160-210

IBIS VARIO H	4	5
WEIGHT [kg]	1680	1980
POWER [HP]	130-160	150-200

IBIS VARIO H	PLUS 4	PLUS 5
WEIGHT [kg]	1770	2160
POWER [HP]	140-170	160-210







UNIA Sp. z o.o.

Szosa Torunska 32/38, 86-300 Grudziadz, Poland

NIP: PL 8761008692

tel: +48 56 45 10 500, www.uniagroup.com

