AMAZONE

Semi-mounted reversible plough **Tyrok**

Tyrok semi-mounted reversible plough

A plough that sets new standards

The new Tyrok plough enables AMAZONE to offer unique advantages for your farm. Maximum speed with minimum wear is possible thanks to the new SpeedBlade plough bodies. At the same time, the new over-dimensioned beam ensures a constant furrow depth over the full width. AMAZONE always offers the right solution for any farm with the new Tyrok, even those with the most diverse requirements.

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FOR MORE INFORMATION

MORE INFORMATION
www.amazone.net/tyrok

AMAZONE ploughs

For intelligent crop production

Ploughing today

The plough is symbolic in agriculture. Alongside crop establishment, fertilisation and plant protection, soil tillage plays a key role in the success of arable farming, Sustainability and a more efficient level of operation will be the decisive factors by which agriculture will be judged in the future.

The desire to maintain a sustainable soil structure, to increase productivity and, above all, to achieve higher profitability lies behind the design. The use of modern ploughs, alongside conservation tillage techniques and alternative sowing systems, remains at the forefront when it comes to improved yields and thus the success of any soil tillage operation.

AMAZONE ploughs are characterised by their robust technology, an excellent quality of work, optimal adaptation to local conditions and thus offer the highest possible cost-effectiveness.

The benefits:

- Individual matching of the plough to suit any application
- Simple adjustment and comfortable operation
- Long lifespan thanks to the robust construction

Utilising the right technique is crucial!

It is not philosophy but the right choice of soil tillage method that is critical to success. Conventional sowing systems that are based on the use of the plough are still widespread. As a result of this and due to ever-changing parameters such as commodity prices, energy production, reduction of fallow vegetation, etc., many farms practice both conventional and mulch sowing methods in parallel. The yield-guaranteeing function of the plough is highly valued here.

Advantages of conventional soil tillage

- Effective weed control via mechanical means by light deprivation, effective control around field borders
- Quicker soil warming and better soil aeration for increased yields in crops demanding higher soil temperatures
- The only soil tillage option in constantly wet conditions
- Reduced risk of disease carryover to the following crop
- Accelerates the microbial activity in the soil by oxygen enrichment
- Mechanical control of UV light sensitive soil pests, slugs and mice

Tyrok

7, 8 or 9 furrow and max. 400 hp

The advantages at a glance:

- Efficient and extremely robust semi-mounted reversible plough with high operational reliability
- Exact furrow depth over the entire length of the plough thanks to the over-dimensioned rectangular beam
- The **AutoAdapt** hydraulic front furrow adjustment is fitted as standard and provides perfect matching to the last furrow, even under changing conditions
- Unique **SpeedBlade** plough bodies with an enlarged front shin of the mouldboard and the ©plus hardening process allow higher speed with less wear
- Fast turning with low stress as a result of the **SmartTurn** twin-stage hydraulic end position damping
- The substantial support wheel ensures an exact depth control and the optimum soil structure protection
- Maximum safety and comfort in the transport position due to standard damping of the support wheel
- Shear bolt or hydraulic overload protection positive re-entry into the soil
- Centralised **SmartCenter** settings centre on the headstock of the plough for quick operation

Plough body range

with **5 plough bodies**

Fast turning with low stress through

SmartTurn

Automatic front furrow adjustment to the

furrow width with **AutoAdapt**

Unique and patented –

SpeedBlade plough bodies with ©plus hardening process

for maximum speed with minimum wear

Meticulously designed from top to bottom

Tyrok semi-mounted reversible plough

The models

With the Tyrok, AMAZONE offers a semi-mounted reversible plough in 7, 8 or 9 furrows and mechanical or hydraulic furrow width adjustment from 33 cm to 55 cm. Designed for use under the most arduous of conditions. The Tyrok is a robust plough with a high degree of comfort, thanks to its easy handling and adjustment.

The features at a glance

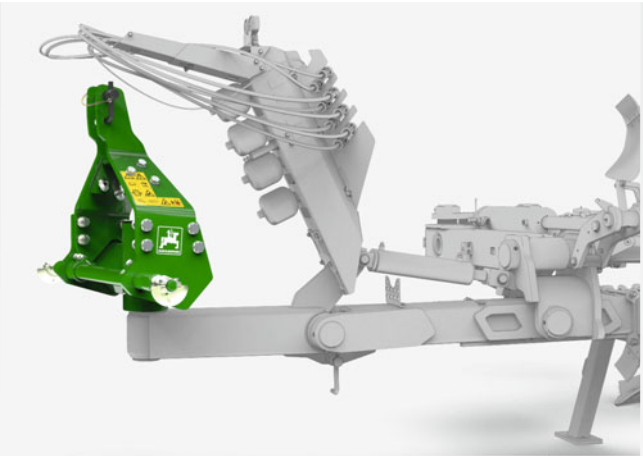
- 7, 8 or 9 furrows
- For tractors up to 400 hp
- over-dimensioned beam: 200 x 150 x 10 mm
- Standard with hydraulic front furrow width adjustment
- Shear bolt or hydraulic overload protection

Overview of the Tyrok range:

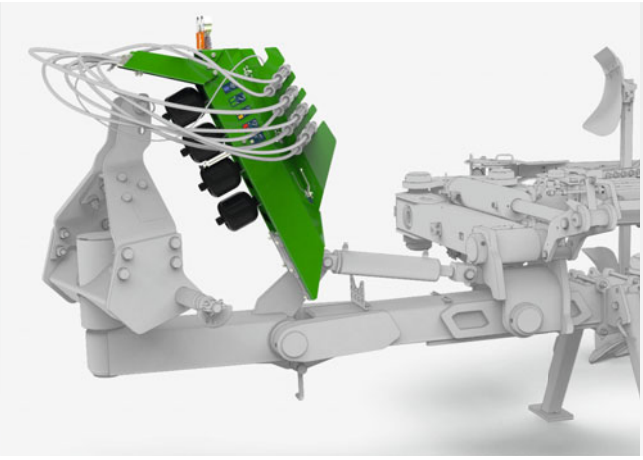
	No. of furrows	Body to body distance (cm)	Beam height (cm)	Furrow width adjustment (cm)	Furrow width adjustment (cm)	Overload protection
				mechanical furrow width	hydraulic furrow width	
Tyrok 400	7	100	80/85	35/40/45/50	–	Shear bolt
	8					
	9					
Tyrok 400 V	7	100	80/85	–	33–55	Shear bolt
	8					
Tyrok 400 VS	7	100	80	–	33–55	Hydraulic overload protection
	8					

Comfortable operation – Precise working

The Tyrok design



The Tyrok headstock



Tyrok SmartCenter

Optimised headstock design

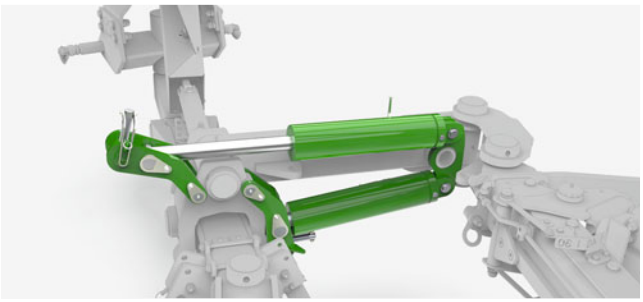
The headstock of the Tyrok provides the perfect link up to the tractor with the minimum of wear. The headstock is rotatable by 180°, which enables the side pull to be reduced, thereby saving fuel. Maximum flexibility is also provided by two coupling options for the top link as well as the lower link cross shaft in Cat. 3, 4N and 4. The Tyrok can also be equipped with traction control as an option. Another hydraulic cylinder transfers weight onto the tractor's rear axle thus increasing traction. This provides maximum pulling power whilst reducing fuel consumption.

SmartCenter for comfortable adjustment

The uncluttered hose rail enables optimum hose guidance to the tractor. So nothing stands in the way of quickly attaching the plough. In addition, all hydraulic functions can be controlled directly at the SmartCenter. This enables comfortable adjustment of the plough right at the front and directly on the machine.

SmartTurn – Low-stress turnover in just 9 seconds!

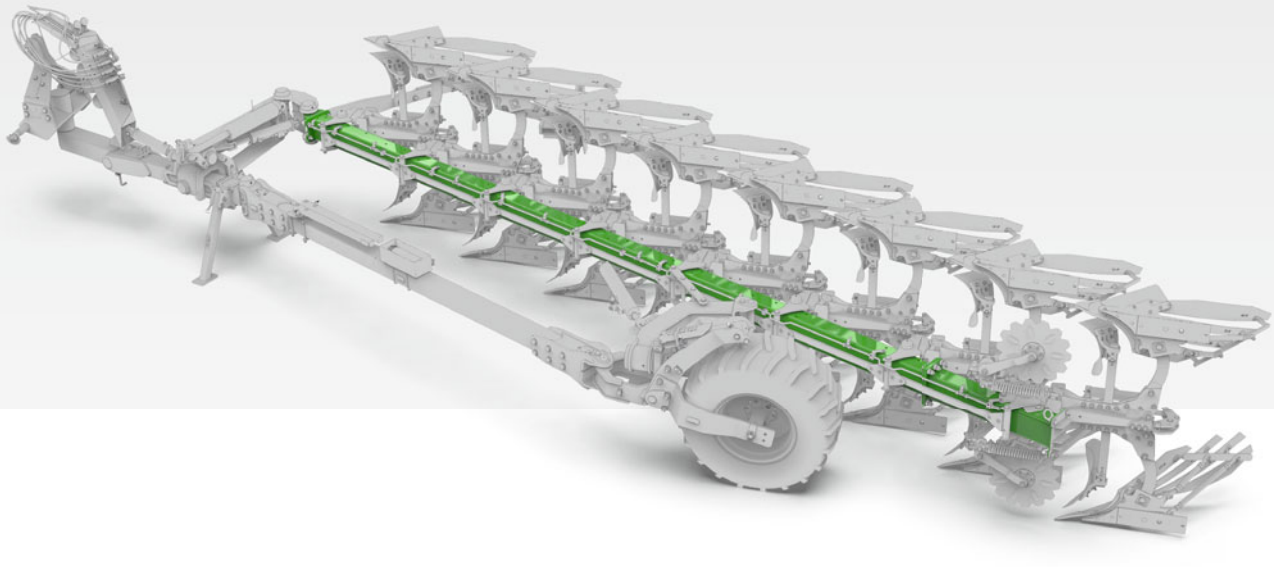
Thanks to its twin-stage end-position damping, the plough's turning process is slowed down shortly before reaching the end of travel. This results in a damping effect which reduces stress on the materials when the cylinder is retracted. There is no need to make any compromises here as the low-stress turnover process is completed within only 9 seconds.



Turnover cylinder with hydraulic throttle valve

The beam

Strength without compromises



The beam – pure strength

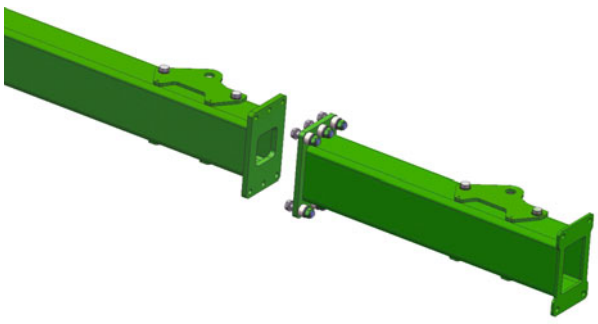
The rectangular beam with the dimensions 200 x 150 x 10 mm minimises bending of the beam even under heavy load and hard soil conditions. The rigidity of the beam stops any bending, thereby ensuring the furrow depth remains constant across the entire furrow width. The rectangular shape also increases the load capacity of the beam. The beam height is 80 cm. 85 cm is also available as an option with shear bolt overload protection.

The key advantages:

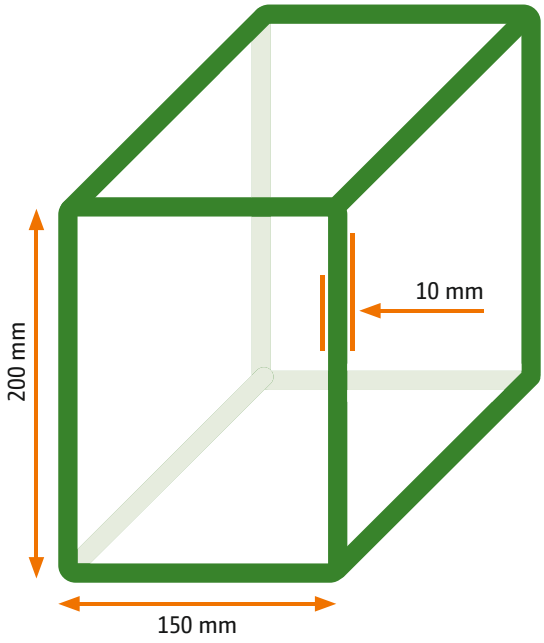
- Extremely stable beam thanks to the over-dimensioned box section
- Comfortable and gentle turnover
- Safe and comfortable transport travel
- Constant furrow depth of all bodies thanks to the rigid beam
- High flexibility in the number of furrows
- Beam height 80 cm (85 cm as an option with shear bolt overload protection)

High flexibility

The simple yet strong design of the Tyrok enables the use of an extendable beam system. This means that an additional furrow can be removed or added in next to no time.



Extendable beam system with flange



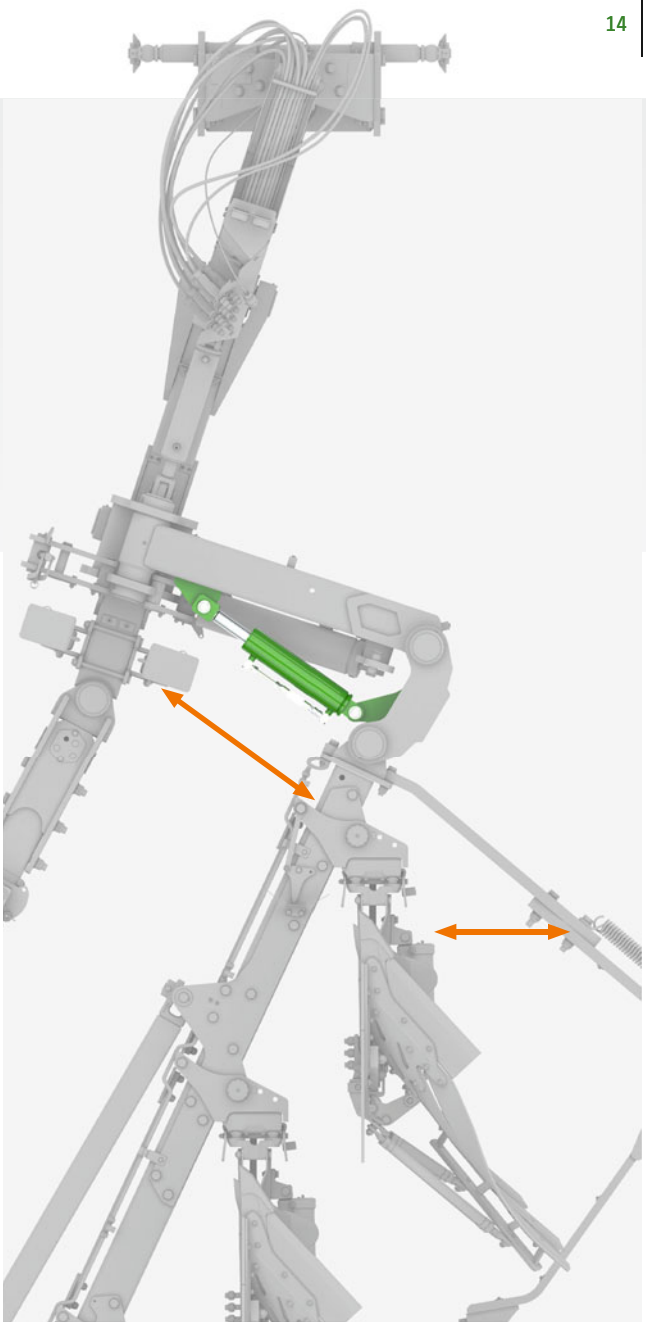
Section of the rigid beam

Front furrow width

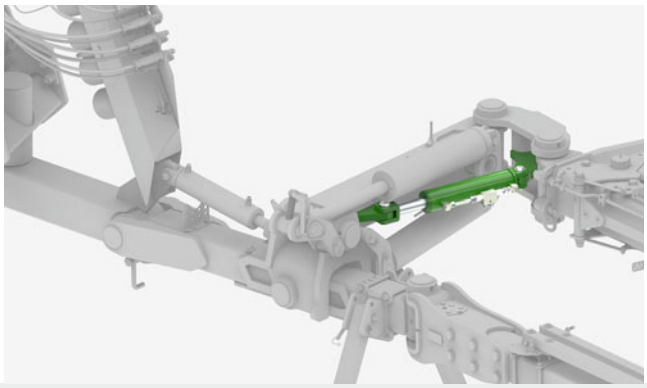
Always the right setting:

AutoAdapt – Automatic adaptation of front furrow when changing the furrow width

The front furrow width is automatically adjusted when changing the furrow width to enable a perfect matching up even under changing conditions. The standard hydraulic adjustment of the front furrow guarantees high quality operation under all conditions. At the same time, it is possible to react to changing conditions quickly and comfortably. The swing arm is controlled directly by the cylinder during the process. As a result, inside wheel track dimensions from 1.2 m to 1.6 m are possible.



Intelligent kinematic system for adjustment of the front furrow width



Hydraulic cylinder for adjusting the front furrow width

The advantages thanks to AutoAdapt:

- Simple and comfortable adaptation of the front furrow to the furrow width
- Precise connection
- Robust, low-wear system for basic adjustment
- Highly responsive, even on the move, owing to direct control of the first body
- Perfect plough profile even on variable soils, slopes or when changing tractors

SpeedBlade plough bodies

Plough bodies from a new perspective

SpeedBlade

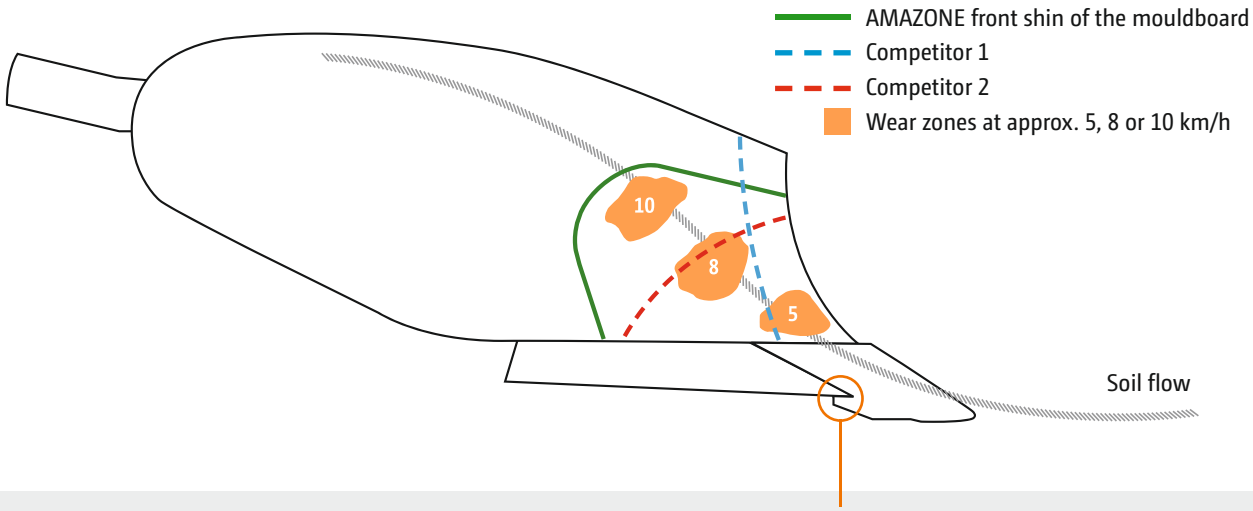
Maximum speed – Minimum wear

SpeedBlade –
The new innovative plough bodies

The new SpeedBlade plough bodies with their patented extra-large front shin on the mouldboard and the ©plus hardening process ensure significantly less wear at high forward speeds. As ploughing speeds increase, the wear point shifts further to the rear. Wear on conventional plough bodies begins directly on the wing at higher speeds as a result of the small front shin of the mouldboard. Only the front shin of the mouldboard has to be replaced thanks to the patented enlarged front shin of the mouldboard. This avoids the troublesome and expensive replacement of the entire wing.

SpeedBlade plough body with the patented large mouldboard front shin and the ©plus hardening process

SpeedBlade body
with AMAZONE patented mouldboard front shin



SpeedBlade body U 40

The point covers the wing:

- The joint is therefore protected by the point
- Plant residues, baler twine, wire or root remnants cannot get caught up

The ©plus hardening process

First-class quality for long-lasting wear parts

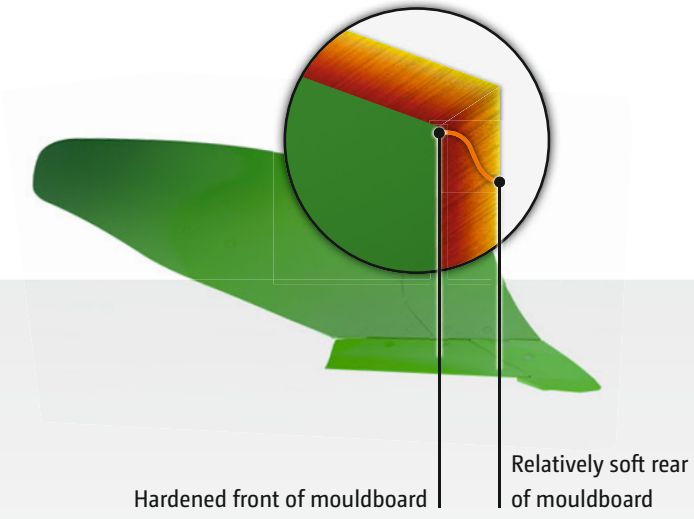
The ©plus tempering process – the know-how of heat treatment

As manufacturers of wearing parts for the soil tillage industry, AMAZONE can look back on a history spanning decades. Continuous advancements in materials and production techniques, as well as our know-how in heat treatment, lies behind the plough wearing metal parts of the highest quality.

Carbon in its purest form, diamond, is the hardest naturally occurring substance. A hardening process involving the introduction of carbon into the steel is used to increase the hardness and durability of ©plus wearing parts. AMAZONE uses a unique hardening process to achieve a very high level of hardness on the front of components, such as the shin, to produce the optimum resistance to wear. The back remains relatively soft but at the same time extremely tough and impact resistant.

Benefits of the ©plus hardening process:

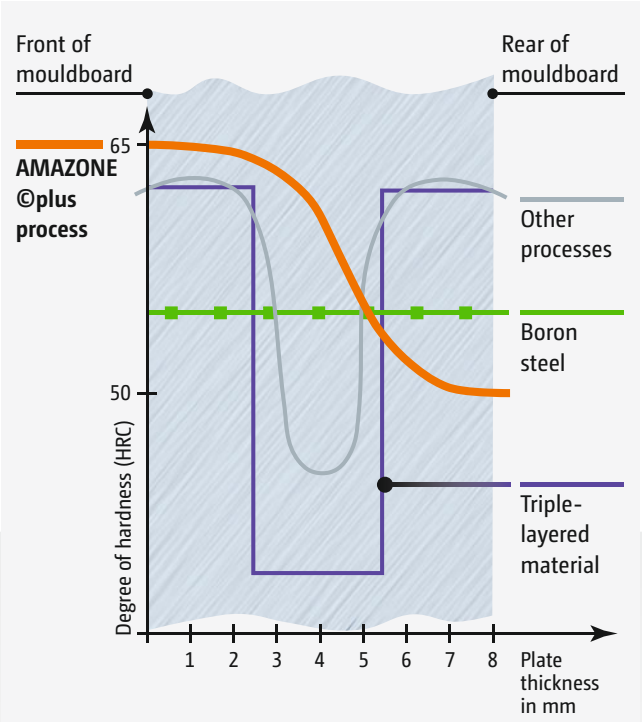
- Longer service life
- High impact resistance
- Less pulling power requirement
- Reduced fuel consumption
- Less sticking to the smoother outer surface

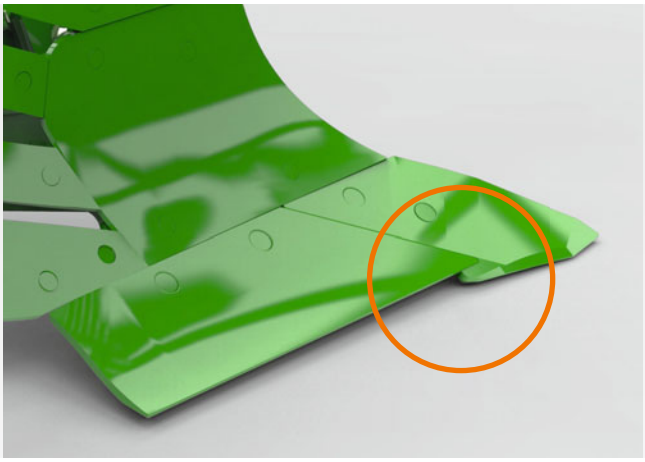


Box section beam made of high-grade steel for a long service life

All the beams on AMAZONE ploughs are produced from a special high-tensile steel. The over-sized wall thickness means that, not only is the whole beam robust, but also all the bolt fixings are extremely strong with this heavy wall thickness also preventing any hole elongation or deformation of the box section around the bolt fixings. A further feature of the ploughs is the design of the plough beam without any weld seams.

Cross-section of mouldboard – comparison of the different hardening methods





Coverage of the point with the wing

Points –
The right point for every application

The advantages of the different points:

Standard point:
- Angled at the front for optimum soil penetration
- The point covers the wing

HD point:
- Angled at the front for optimum soil penetration
- Armoured at the rear
- For particularly tough conditions and a long service life

Reversible points:
- With a very shallow angle for clean and effective soil penetration
- Point can be used on both sides
- Quick turning for short downtimes

HD point

Standard point

Reversible point

Covered point –
Maximum ease of pull of the plough body

Since the point covers the wing, the joint is protected by the point. This clever join up means that no plant residues, baler twine or root remnants get caught in the point.

Open frog –
To make things easier

The shape of the open frog prevents soil from getting caught underneath. This means that the plough is even easier to pull. At the same time, the solid adjustable support of the slatted mouldboards provides more stability.

AMAZONE plough bodies

Reliable – Easy to pull – Top-class

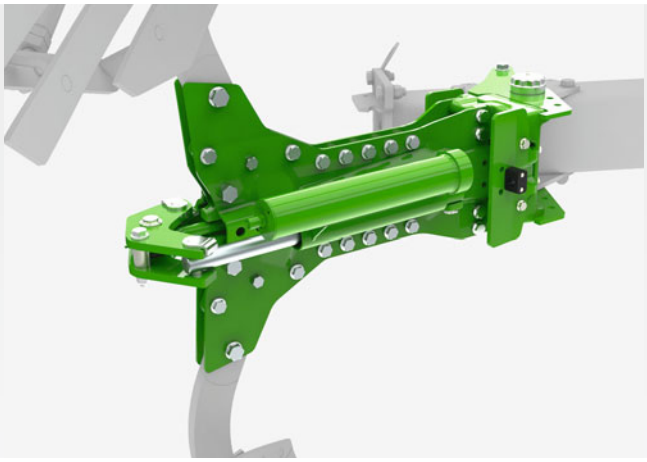
Suitability:

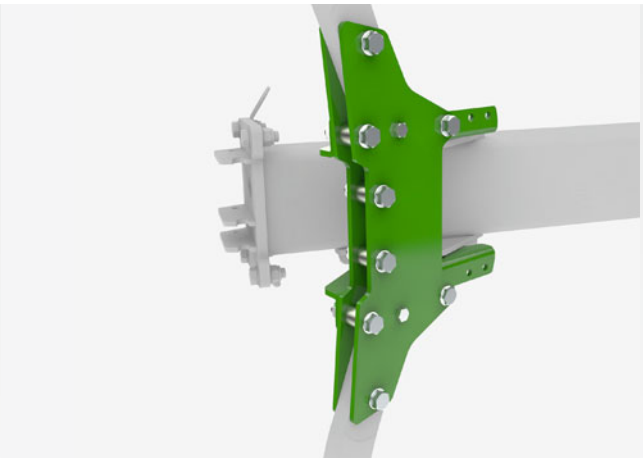
++	very well suited
+	well suited
o	suited
–	poorly suited

Plough bodies	STW 35	STU 40	U 40	S 35	W 35
Minimum working depth approx. (cm)	18	18	18	15	15
Maximum working depth approx. (cm)	30	35	35	30	30
Maximum furrow width approx. (cm)	50	55	55	50	50
Suitability	– o + ++	– o + ++	– o + ++	– o + ++	– o + ++
Light, sticky soils (peat)					
Light soils (sand)					
Medium soil					
Heavy soil					
Very heavy soils (clay)					
Sloping terrain	o	o	o	++	o
Crumbling	++	++	++	o	o
Furrow clearance	++	++	o	o	o
Pulling power requirement	++	o	o	++	++
Minimal soil inversion	++	o	o	++	o

Overload protection

Always on the safe side





Hydraulic overload protection

The hydraulic overload protection is basically a hydraulic cylinder with a directly connected, nitrogen-filled hydraulic accumulator on each pair of plough bodies. When triggered, the plough body pushes a piston into the accumulator via the hydraulic cylinder. The gas is compressed and automatically returns the body to its initial position after passing the obstacle. A choice can be made between the standard hydraulic protection with decentralised adjustment or the optional protection with central adjustment for convenient and quick adjustment of the release pressure of all bodies.

The benefits

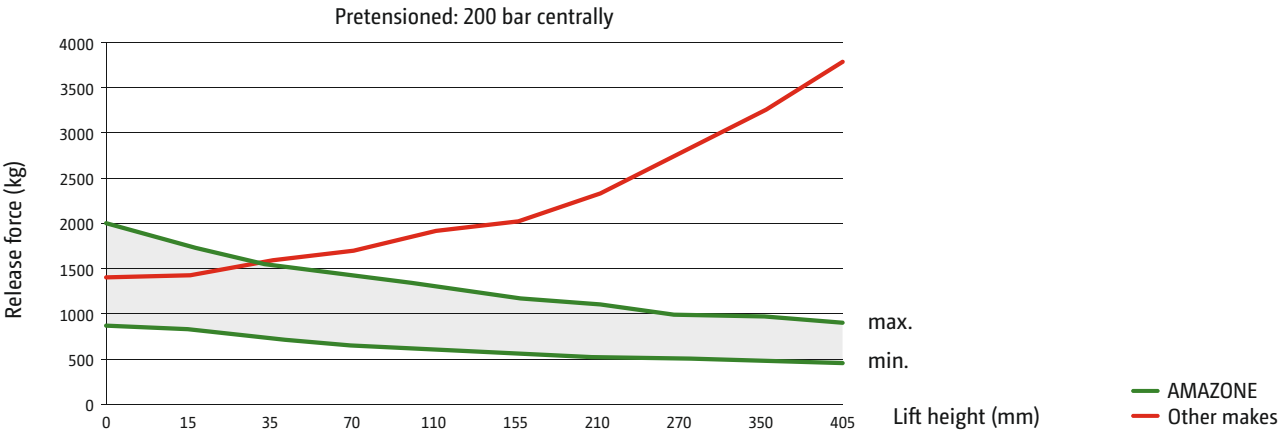
- Simple adaptation of the release force
- Smooth and material protecting operation
- Exchangeable ball joints and sockets
- As standard, with additional shear bolt

Mechanical overload protection using shear bolts

Shear bolts are the tried and tested standard solution for this system. Under load, the shear bolt snaps off at the predetermined breaking point and the plough body gives way to the obstacle by swivelling upwards. The high release forces of the shear bolt enable use even in heavy and hard soils.

The benefits

- 6,200 kg shear force
- Exact shearing via the double-cut, hardened flange plates



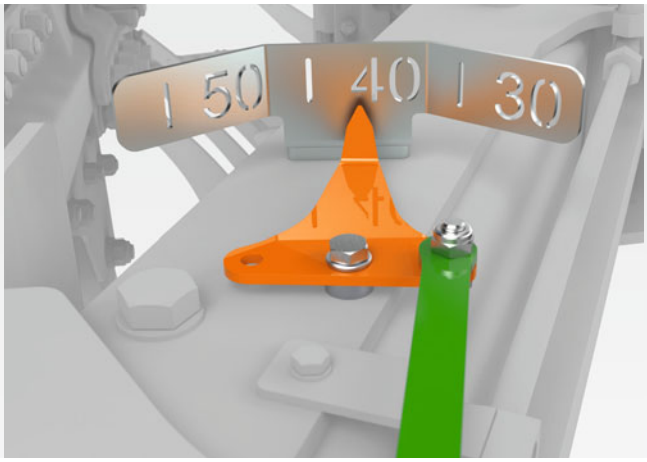
It's better to bend than to break

The pressure acting on the plough bodies is determined by many different factors. The correct release pressure is of great importance so as to ensure that the body sits firmly in the ground, but no stones are ploughed up. This can be comfortably set with the hydraulic overload protection.

Unlike some other manufacturers, the release pressure decreases as the lift height increases. A gentle return of the body into the ground without damage can thus be ensured.

Furrow width adjustment

Precise and comfortable



Hydraulic adjustment of the furrow width

Mechanical adjustment of the furrow width

Tyrok V – comfortable hydraulic operation

The furrow width can be smoothly and hydraulically adjusted from the tractor in Tyrok V ploughs. A clearly visible display consisting of a scale and indicator keeps the driver informed about the furrow width setting. The integrated kinematics of the Tyrok V also automatically set the pull point, the front furrow width, all the soil engaging tools and the support wheel.

The advantages of the Tyrok V

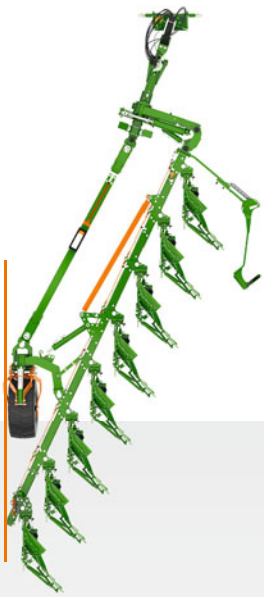
- Variable furrow width from 33 cm to 55 cm per body
- Automatic adjustment of the front furrow when changing the furrow width thanks to AutoAdapt
- No readjustment necessary
- Comfortable and time-saving operation

Tyrok – mechanically simple

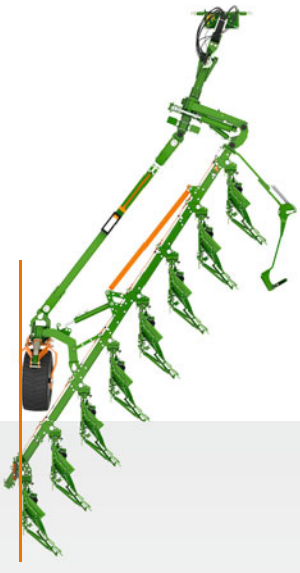
The standard furrow width adjustment can be altered in 4 steps by manually pivoting the leg fixing consoles. The implement can therefore easily be adapted to different conditions (soil conditions, tractor, etc.). When the furrow width is adjusted, all the soil-engaging metal and support wheels are also automatically adjusted. No additional correction is necessary.

The support wheel

Exact depth control combined with perfect boundary ploughing



Furrow width per body: 42.5 cm



Furrow width per body: 55 cm

Perfect boundary ploughing

The support wheel is positioned to the side of the beam so that ploughing close up to the field border is possible. The wheel is located inside the furrow width at maximum furrow width. The wheel is located inside the machine even at medium furrow width. Working directly near boundaries or obstructions becomes even more precise as a result.

Tyre size:
400/55-22.5

Tyre size:
500/45-22.5

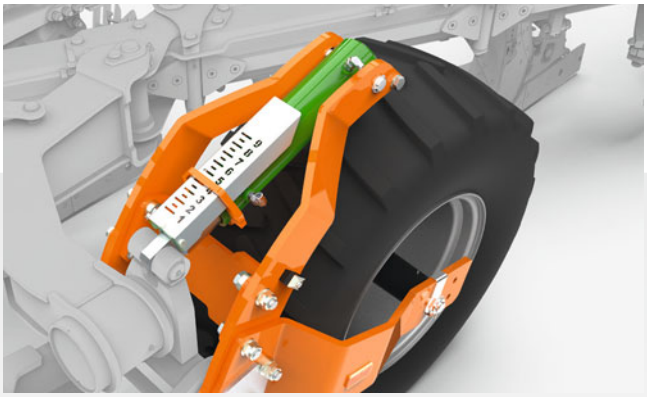
Tyre size:
500/60-22.5

- The various tyre sizes mean that the support wheel can be optimally adapted to the practical requirements.

Exact depth control

A choice of large-dimensioned support wheels provide optimum ground drive and exact depth control, even under the most arduous of conditions. The depth is easily adjusted by means of the support wheel via a hydraulic cylinder or clips on the piston rod without using tools. The scraper reliably cleans the wheel. The standard hydro-pneumatic suspension of the support wheel provides maximum safety and the highest comfort on the road.

The benefits
- Safe and comfortable transport travel
- Reliable depth control



Depth adjustment of the support wheel

Equipment for every requirement

Versatile for special requirements

Trash boards

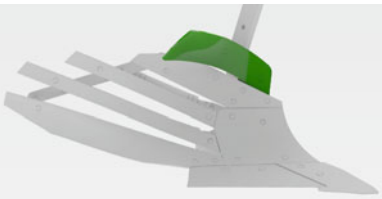
A cost-effective alternative to skimmers when incorporating surface crop residues. With additional support for leg as standard.

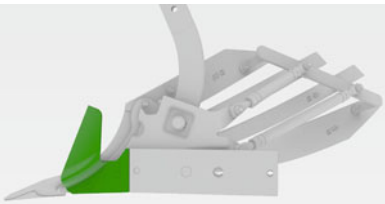
Sword landsides

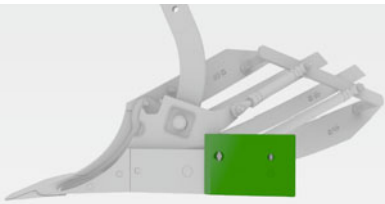
The sword landside is an alternative to the disc coulter, which, especially on heavy, stony ground ensures a clean furrow wall and also reduces the wear and tear on the plough body.

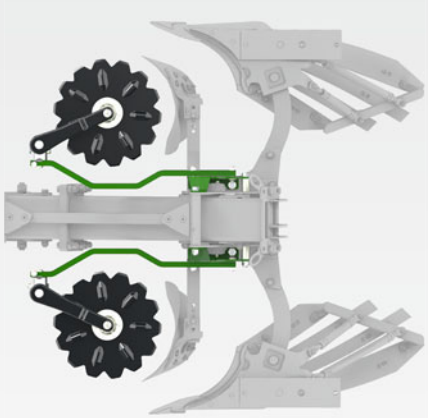
Landside protection

The landside protection increases the area for support of the plough on the furrow wall. This improves plough guidance significantly, especially on slopes.

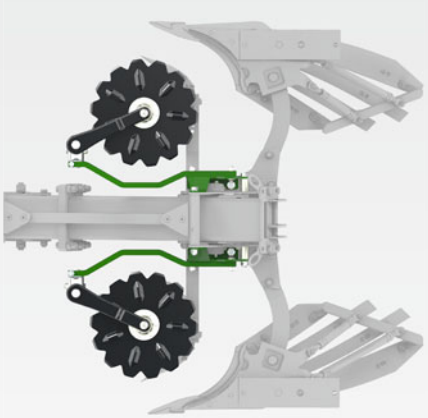




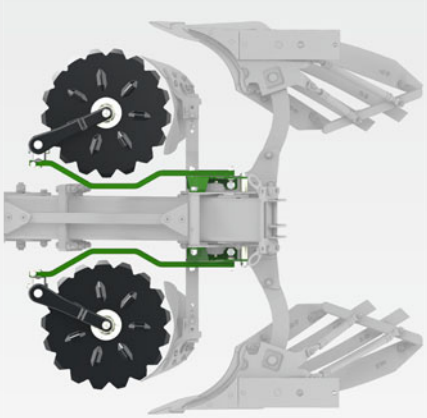




Serrated disc coulter,
Ø 500 mm, with a long holder



Serrated disc coulter,
Ø 500 mm, with a short holder

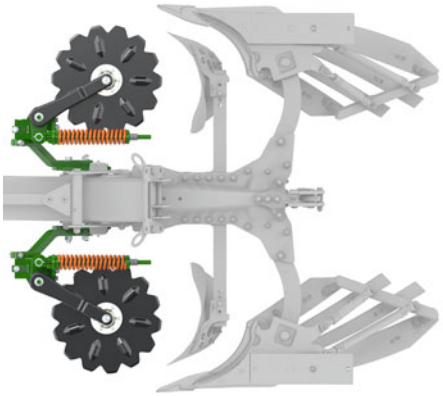


Serrated disc coulter,
Ø 600 mm, with a long holder

Disc coulters – A clean solution

The disc coulter is important for a clean ploughing performance. Disc coulters also make a considerable contribution to efficient ploughing. The disc coulters precise cutting action helps achieve full turning and complete incorporation of crop residues as well as leaving an effective furrow clearance.

The disc coulter is available in a smooth or serrated form with a diameter of 500 mm and in a serrated form with 600 mm.



Spring-loaded, serrated disc coulter,
Ø 500 mm

Skimmers – For any situation

The use of skimmers ensures blockage-free ploughing, even under the most difficult of conditions. The following skimmers are available:

M1 Skimmer
The M1 skimmer is universally suited for use in grassland ploughing as well as where there are large amounts of crop residues, especially maize straw.

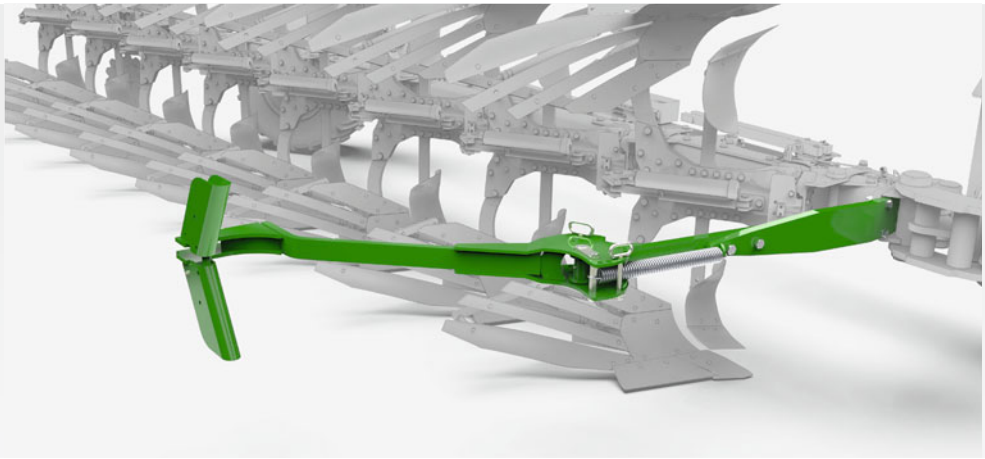
G1 Skimmer
The use of the G1 skimmer ensures blockage-free ploughing, especially on heavy and sticky ground or when ploughing grassland for the first time. The easy adjustability of the skimmers means that the finish is left even more precise.

M1 Skimmer

G1 Skimmer

Packer

Levelling and reconsolidation in one pass



Robust and adjustable swivel press arm

Swivel press arm

A swivel press arm can be installed as an option for combination with a packer. All packer arms are equipped with a spring-loaded catcher which dampens the load peaks caused when picking up the packer. The arm is operated hydraulically via an additional spool valve for optimum comfort.

Packer – for even greater efficiency

AMAZONE has expanded the packer range via a strategic cooperation with the company, Tigges for even greater efficiency on your farm. As a result, it is now possible to combine the Tyrok with packers from Tigges in an AMAZONE design. Various ring diameters as well as different ring profiles are offered. In addition, there is a choice of single or double ring packers up to a working width of 4.65 m.

Tyrok semi-mounted reversible plough

Model	Tyrok 400			Tyrok 400 V		Tyrok 400 VS	
No. of furrows	7	8	9	7	8	7	8
Tractor power up to (kW/HP)	295/400						
Interbody clearance (cm)	100						
Beam height (cm)	80, 85			80, 85		80	
Furrow width adjustment	Mechanical			Hydraulic		Hydraulic	
Overload protection	Shear bolt			Shear bolt		Hydraulic overload protection	
Furrow width per body (cm)	35, 40, 45, 50			33 – 55		33 – 55	
Support wheel (dimension)	400/55-22.5, 500/45-22.5, 500/60-22.5						
Weight of the base machine (kg)	3,788	4,129	4,279	3,899	4,140	4,602	4,860

Illustrations, content and technical data are not binding and may differ depending on the level of equipment. Country-specific road traffic regulations apply and must be complied with, meaning that special approval may be required. The permissible axle loads and total weights of the tractor have to be checked. Not all the listed combination options are possible with all tractor manufacturers.

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