



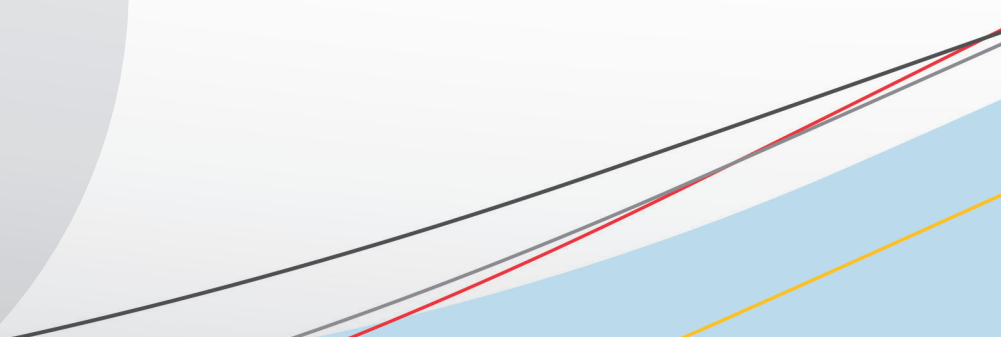
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Mini

REVERSIBLE SHALLOW PLOUGHS

Reinventing Ploughing





OVLAC

MORE THAN 85 YEARS EXPERIENCE

In tillage equipment

Ovlac is a **family-owned company** which has been manufacturing farming equipment **since 1936**. From the beginning, **Ovlac** has focused its activity around manufacturing **mouldboard ploughs**, which have been the company's flagship product for decades.

Today, Ovlac is run by the family's third generation and is **the largest Spanish tillage equipment manufacturer**.

Ovlac exports around 60% of its production to more than **20 countries around the world** including demanding markets such as France, Germany and the United Kingdom and **beyond Europe** to Chile, South Africa, New Zealand and China.

Thanks to its **state of the art manufacturing techniques**, and **in-house R&D department**, Ovlac can guarantee high quality throughout its product ranges. **Ovlac's** high standards are also ingrained into its day-to-day manufacturing processes.

Every step and decision taken at Ovlac is carried out to meet a key goal: to offer farmers technically advanced, reliable products they can be proud of.



MINI

PART OF A BIG FAMILY

The Ovlac Mini plough is designed to combine the advantages of reduced tillage with soil inversion. Ovlac have listened to the market and utilised their 85 years of manufacturing experience to produce a plough capable of complete inversion without disturbing the soil deeper than 20cm. The result, the Mini shallow plough, is a specialist product enabling high work rates, low fuel consumption and excellent weed control.

Traditional ploughing is, without doubt, an ecological and efficient method of weed and disease control. However, in some situations deep ploughing unnecessarily mixes the soil layers bringing unstructured soil to the surface and burying finer topsoil. In the early days of ploughing the maximum depth was around 6" (15cm), which was ideal for keeping the fine tilth, organic matter and beneficial organisms which thrive in the top soil near the surface. Higher horsepower and annual structural damage to the soil by heavy machinery have unnecessarily led to ever deeper ploughing in some farming systems. The Mini provides the benefits of soil inversion and a weed "reset" whilst preserving the medium depth layer and dramatically increasing work rates. **The Mini achieves what a multitude of medium depth cultivators are failing to do.**

The Mini is an innovative development, it has been designed as a shallow plough able to cope with stubble and soil residue at limited depths of 8-20cm. This superficial inversion of the soil surface creates cavities for air and water interchange which enable quicker decomposition of organic matter, improving soil fertility and structure. The shares of the plough also break capillarity helping reduce evaporation from depth in dry periods.

Another advantage of the Mini shallow plough is that it works "on land" preventing soil compaction at the bottom of the furrow and enabling wide tyres and dual wheels to be used on the tractor for grip or to reduce compaction. This also means that all the soil that has been driven on ahead of the plough is cultivated by the Mini immediately behind the tractor.

Furthermore, ploughing at 15cm deep requires only 1/2 of the tractor power and therefore fuel usage of ploughing at 30cm deep. Hence, the same tractor is able to plough 40% wider with a Mini than a traditional plough. The Mini also cuts operational costs, it is simple and light and yet extremely robust.

Genuine ovlac

Quality manufacturing

The Mini undergoes a manufacturing process with stringent quality controls, starting with the use of superior raw materials and the most modern accurate production machinery. All critical parts are made with HEL (High Elasticity Limit) Swedish Steel. The frame, headstock and beams are all entirely welded by robots to ensure consistent quality. The end result, a solid reliable Mini.

Furthermore, with regards to the wearing parts, the reversible points and shares are drop forged for maximum strength and endurance, mouldboards are 8mm thick Borochrome steel and all parts are hardened and tempered to attain the best possible compromise between hardness, durability and flexibility.

SPAIN - FRANCE - UNITED KINGDOM - GERMANY - AUSTRIA - SWITZERLAND - ITALY - HOLLAND -
BELGIUM - POLAND - ROMANIA - ESTONIA - LITHUANIA - BULGARIA

“ In use across Europe
with great success ”



Why MINI?

ADVANTAGES OF SHALLOW PLOUGHING OVER MINIMUM TILLAGE CULTIVATION



Better incorporation of residues, improving the microbiological activity of the soil



Improved weed control through burial



Moisture conservation due to the breakage of capillarity

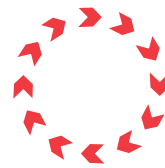


Reduces number of passes in the field

ADVANTAGES OVER TRADITIONAL PLOUGHING



Wider working width, 40% higher daily area covered



More air and water circulating in order to speed up the decomposition of the plant debris



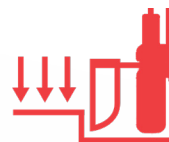
Minimal mixing of soil profile



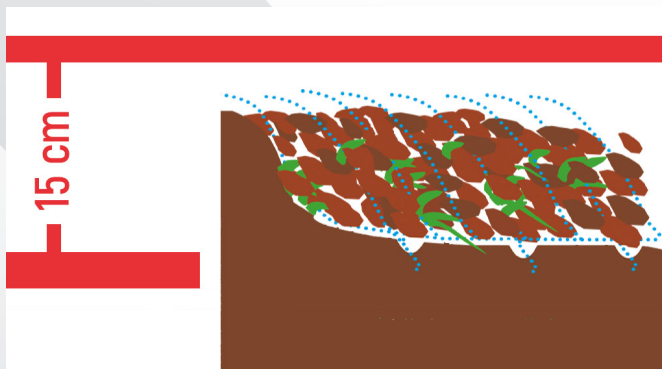
Power requirement and fuel usage decreases significantly working at shallower depths



Organic matter is kept in the surface layer, not buried deep



Less compaction when working out of the furrow

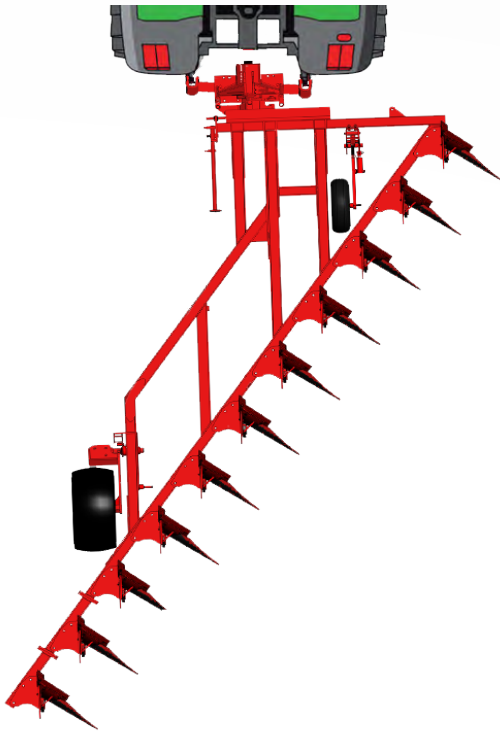


- Air and water circulation
- Crop residue

BENIFITS OF PLOUGHING ON LAND

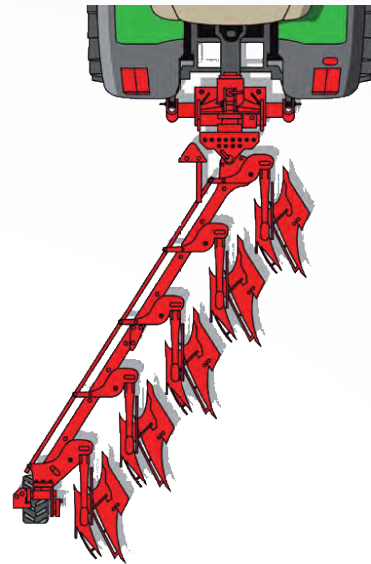
- Enables tractors with dual wheels or wide tyres to be used
- Plough adjustments are much simpler
- No compacted area left that hasn't been cultivated

ON LAND



An on land plough travels behind the full width of the tractor - wheel track compaction is removed immediately.

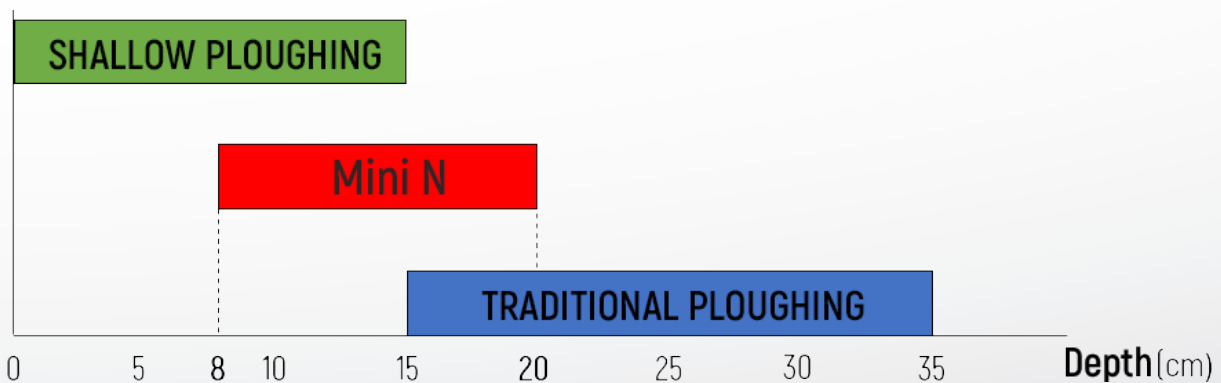
IN FURROW



Working in the furrow using a tractor fitted with 650mm wide tyres and a 5-furrow plough adjusted to 16" (2.03m working width), compaction from tractor tyres represents 32% of the working width.

2 MACHINES IN 1

With the same machine we can achieve two different practices, shallow ploughing and traditional ploughing.



REVERSIBLE MINI RANGE

Mini N



Ever since the first Mini's were produced back in 2003, successive improvements and innovations have been steadily implemented thanks to feedback from farmers, from more than 15 countries, alongside Ovlac's experience. Ovlac listen to their customers who, as professionals, can provide invaluable insight to help improve machines.

Nowadays, the **Mini** is a shallow plough with an undisputable reputation with regards to both reliability and efficiency - its proven.

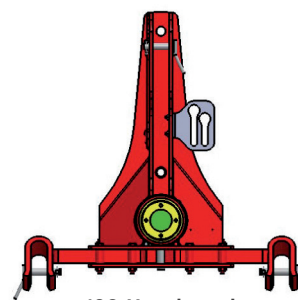
Ovlac's range of Mini shallow ploughs is based on two headstocks.

120 SERIES

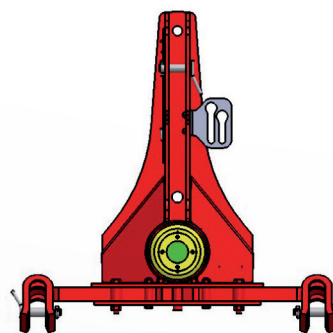
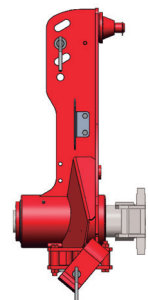
The 120 series headstock with 110mm diameter turnover shaft is used on the 5 furrow frame. The main frame is 100x150mm high quality Swedish steel. This design is rated up to maximum power of 175hp.

150 SERIES

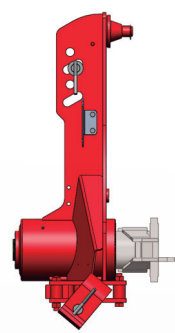
The 150 series headstock with 140mm diameter turnover shaft is utilised on the 7 and 9 furrow frames. The main frame is 100x150mm high quality Swedish steel. This design is rated up to maximum power of 265hp.



120 Headstock
Mini-N-5



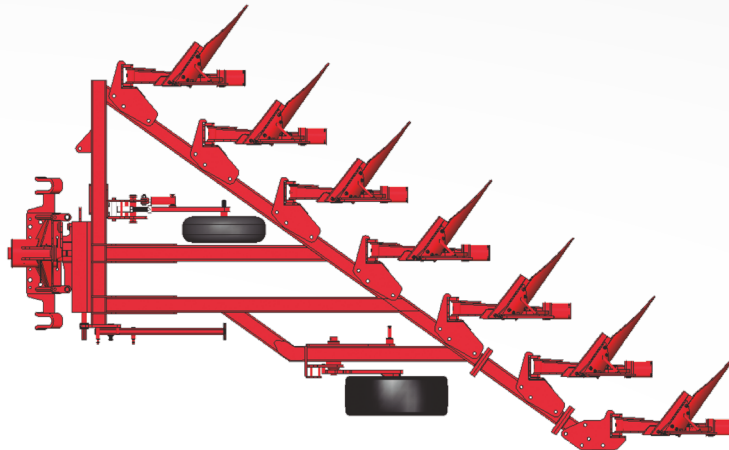
150 Headstock
Mini-N-7/9



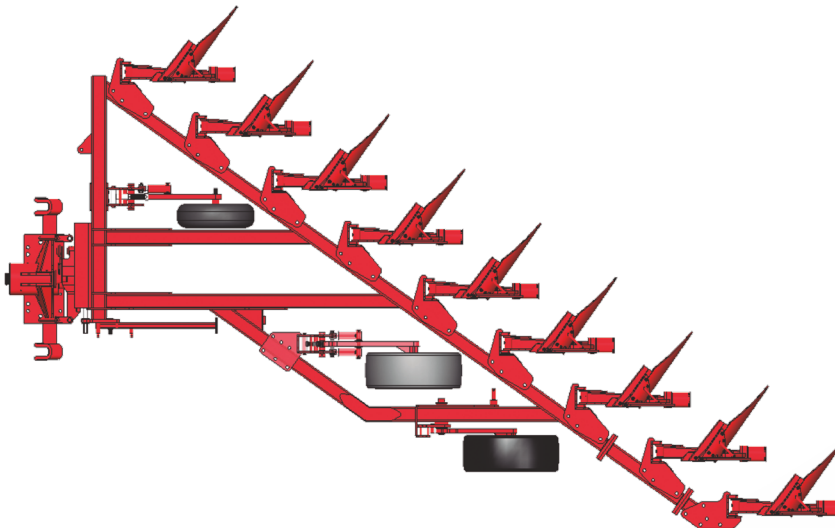
3 FRAMES

The **Mini-N** range is based on 3 main frames, **Mini-N-5**, **Mini-N-7** and **Mini-N-9**, which can all be extended with one or two additional bolt-on bodies.

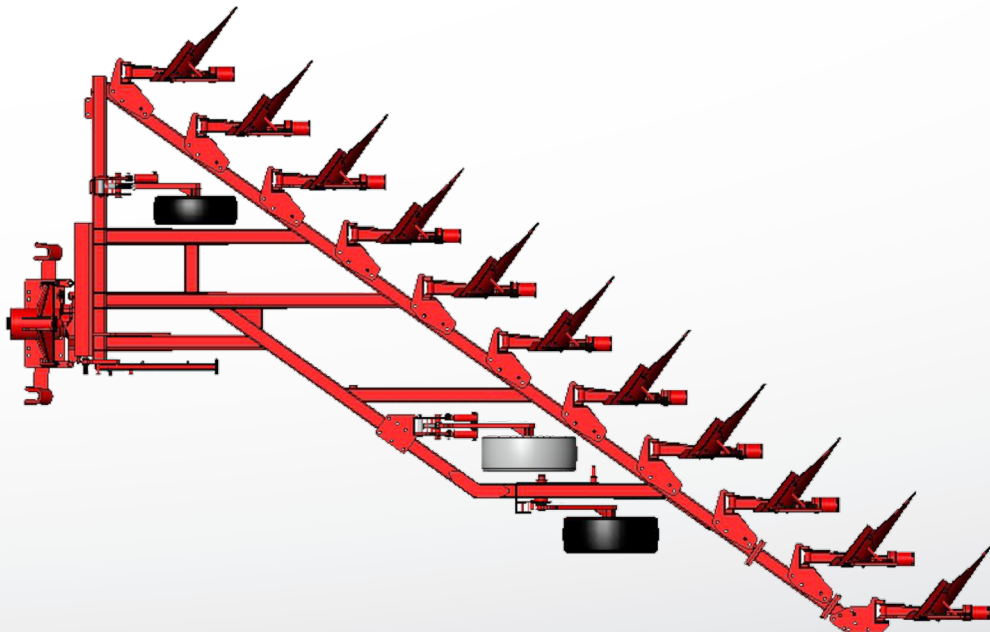
Mini-N-5
5+1+1 Furrows
120 Headstock



Mini-N-7
7+1+1 Furrows
150 Headstock



Mini-N-9
9+1+1 Furrows
150 Headstock



PROTECTION SYSTEMS

Shearbolt or hydraulic reset

In order to take different working conditions into account, **Ovlac Mini** ploughs can be equipped with two alternative protection systems.

SHEARBOLT SYSTEM - NF

The simplest of the two systems. The shearbolt thickness, steel grade and position are calculated so it breaks under a pressure of approx. 2400kg exerted at the plough point. It is imperative that broken shearbolts are replaced with genuine Ovlac bolts. Non-genuine shearbolts with a different dimension or steel grades can result in serious damage to the plough.

NON-STOP HYDRAULIC RESET SYSTEM - NH

A regulated trip mechanism. This system allows adaptation of release pressure according to soil conditions. In heavy or compacted soil, pressure can be increased in order to guarantee penetration and maintain an optimal working position of the bodies. On the contrary, in stony conditions pressure can be set lower to prevent stones being brought to the surface.

Shearbolt



Hydraulic Reset





AUTO RESET PROTECTION FOR THE MOST EXTREME CONDITIONS

The security rod joining the plough body to the frame is heat treated in order to withstand the most demanding conditions. The rod is articulated allowing movement in any direction, hence it offers real 3D protection.



WHAT MAKES THE MINI UNIQUE

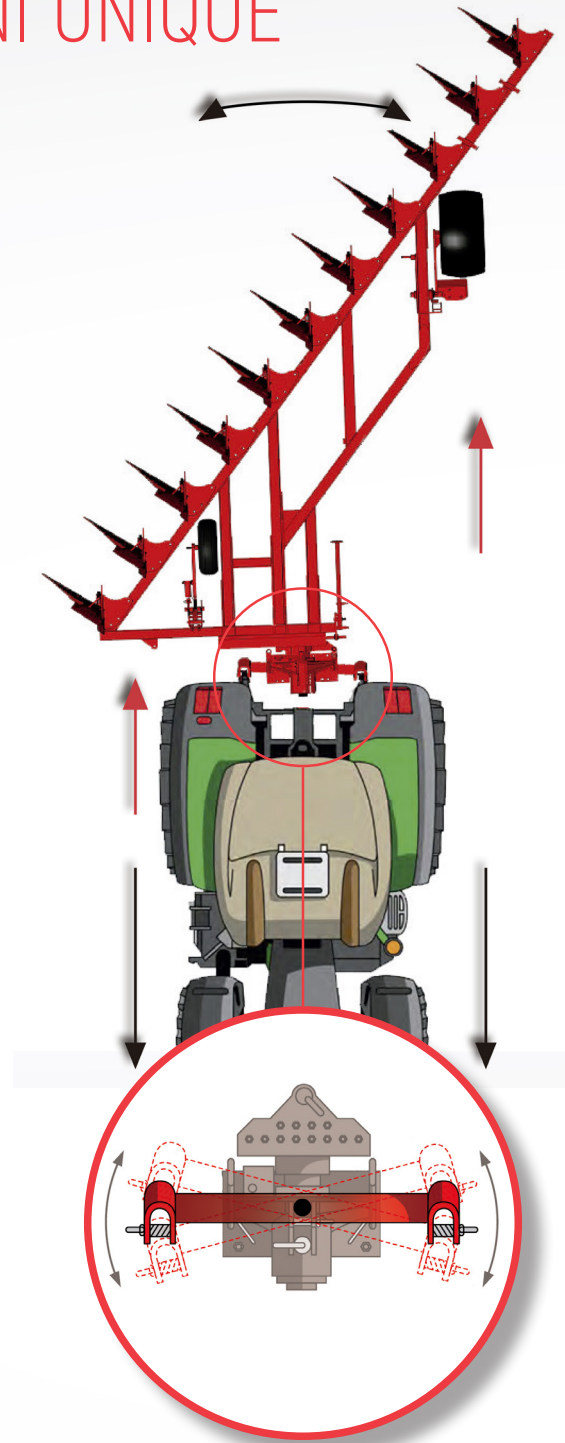
1 - OSCILLATING CROSS SHAFT - AUTOMATIC SELF-ALIGNMENT

Ovlac Mini ploughs are equipped with an Oscillating Cross Shaft with a centre pivot. The plough is pulled from the centre pivot point which ensures it can move independently to follow the tractor and find the perfect balance between the side pressure exerted on the mouldboard and the landslide.

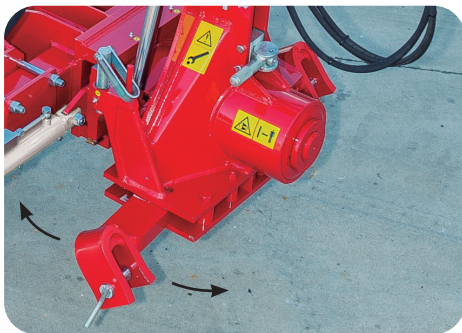
Therefore once the plough is set correctly it is not necessary to make complicated adjustments in order to ensure the plough pulls straight. In work the plough will follow the tractor perfectly.

When lifting the plough for transport or turn over, the Oscillating Cross Shaft **automatically locks** itself in the central position.

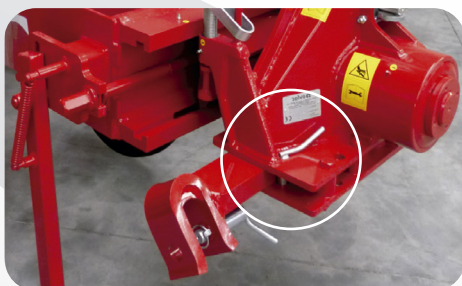
The cross shaft movement also makes it very easy to hitch up to the tractor. In addition to the operational benefits the Oscillating Cross Shaft **significantly reduces strain on the whole plough and fuel usage.**



OSCILLATING



LOCKED



When on sloping ground it is possible to lock the headstock by putting the pin in place.

The Oscillating Cross Shaft allows the operator to plough around headlands and irregular shaped fields which increases daily output.



OSCILLATING DRAWBAR IN ACTION

"Every plough should have one"
Jens Iversen - world ploughing
champion

2 - BOLT ON LEG BRACKETS

The Hardox 500 legs are bolted on to the frame therefore if the worst happens and one is damaged it can be easily replaced.

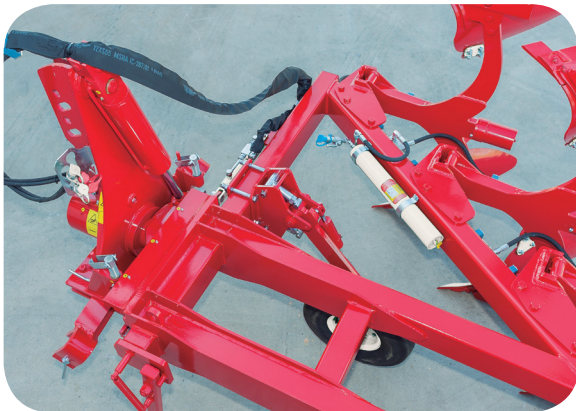


3 - SUBSTANTIAL, SIMPLE AND RELIABLE MAIN CONSTRUCTION

The Mini is designed for simplicity, reliability and operator friendliness.

It is extremely easy to adjust and very reliable.

All the main parts (headstock, frame and legs) are robot welded for longevity.



Headstock and frame support

4 - NON STOP PLOUGHS FOR THE HARDEST CONDITIONS

The 3D articulated Security Rod linking the leg holder to the main frame has been designed to withstand the most rigorous conditions. It provides protection from sideways and vertical force as well as enabling break-back.



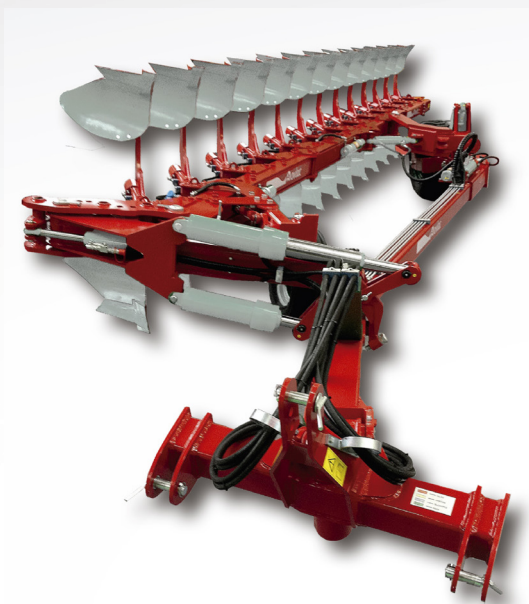
5 - HYDRAULIC FRONT FURROW ADJUSTMENT

The Mini N and S have Hydraulic first furrow adjustment as standard. This makes it possible to adjust the plough offset to match the tractor width. Once set it can easily be varied from the tractor seat to get closer to or further away from the furrow if the working conditions require, for example on hillsides.



SEMI-MOUNTED MINI

Mini S



The semi-mounted **Mini** has been specifically developed for large farms and high-power tractors. Available up to 13 furrows, the Mini S has a working width up to 5m. Around 3 ha/hr can be ploughed at ease.

The **Mini S** is based upon the same frame base used for the traditional on-land semi-mounted ploughs.

In order to ease the turnover of the plough at the headland, the **Mini S** features a front articulation, this folds in the front bodies thus, reducing the turnover radius and minimising the strain on the tractor arms and headstock.



In transport





As with the mounted range, the **Mini S** is available either with shear bolt stone protection or with a hydraulic auto reset system with adjustable breakaway force depending on the working conditions.

“ Unrivalled performance:
more than 3 ha/hr ”



WHEELS

A large range to meet your needs

Ovlac Mini reversible ploughs can be equipped with a number of different wheel types.

There are **Depth Control Wheels** or **Combi Wheels**, for depth control and transport. In addition a depth control wheel can be fitted at the front of the Mini.

This is recommended for larger ploughs (Mini-N-9) as it provides extra stability.



Transport and depth wheel.
Mini N - 340/55 R16
Mini S - 500/50 R17



Front depth control wheel.
Mini N option - 200/60 R14.5
Mini S standard - 250/65 R14.5

3M IVERSET SYSTEM

Unique hydraulic depth control wheel 280/70 utilising **3M Iverset System**



PROFUNDIDAD	CALZOS
0-MIN	
1	●●●●●●●●●●
2	●●●●●●●●●●
3	●●●●●●●●●●
4	●●●●●●●●●●
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12	●●●●●●●●●●
13	●●●●●●●●●●
14	●●●●●●●●●●
15	●●●●●●●●●●
16	●●●●●●●●●●
17	●●●●●●●●●●
18	●●●●●●●●●●
19	●●●●●●●●●●
20-MAX	●●●●●●●●●●

Quick no-tools depth adjustment.

Clips are easily added and removed to adjust the depth.



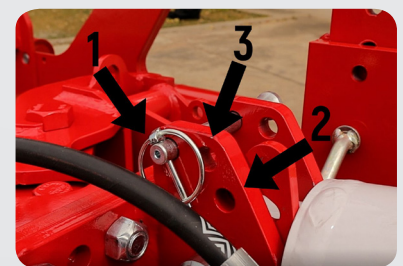
MODE 1

In Mode 1 Ovlac's hydraulic rear depth wheel allows a gradual start and finish on the headland. This means shorter "in's and out's" on the headland and therefore less passes to finish the field.



MODE 2

Set in Mode 2 the hydraulic rear depth wheel controls depth at the edge of the field and operators can plough right up to the field boundary. **(Not applicable on Mini)**



MODE 3

Set the wheel in mode 3 to allow it to move freely.

OPTIONS

Wide range of accesories

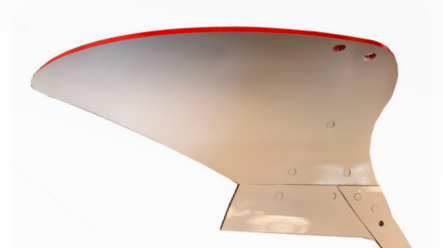
A wide range of accessories are available in order to adapt the plough to all soil types and working conditions.



Slatted mouldboards for sticky conditions-Trashboards to improve burial of trash



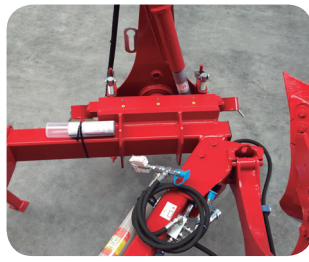
Extra large forged share. 12cm longer than standard share



Eco Flow share, advised for sticky soils to improve flow



1st furrow hydraulic width adjustment
(Standard in the UK)



In-the-furrow version
(only for Mini-N-5 and 5+1)



Inner depth control wheel
(available for Mini-N 7 and 9 frames)



Additional bolted bodies



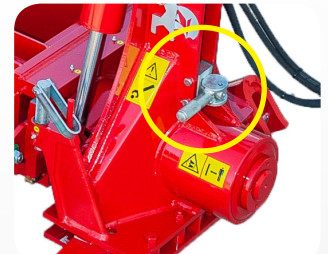
Additional landslide wear plate. Reduces main landslide wear and therefore running costs



"Pan-Cracker"



Light kit



Headstock lock for transport

TECHNICAL FEATURES

F Shearbolt

H Hydraulic Reset

MODEL	Working width (cm)	Recomended HP	Point to point (cm)	Underbeam clearance (cm)	Working width per furrow (cm)	Weight (kg) NF	Weight (kg) NH
Mini N 5	192	105-135hp				1.200	1.400
Mini N 5+1	230	120-155hp	66	70	38.3	1.340	1.560
Mini N 5+2	268	140-175hp				1.480	1.720
Mini N 7	268	140-175hp				1.570	1.830
Mini N 7+1	306	160-200hp	66	70	38.3	1.710	1.990
Mini N 7+2	345	180-220hp				1.850	2.150
Mini N 9	345	180-220hp				1.915	2.265
Mini N 9+1	383	200-240hp	66	70	38.3	2.055	2.425
Mini N 9+2	422	220-295hp				2.195	2.600
MODEL	Working width (cm)	Power (HP)	Point to point (cm)	Underbeam clearance (cm)	Working width per furrow (cm)	Weight (kg) SF	Weight (kg) SH
Mini NS 12	460	250-275hp	66	70	38.3	4.286	4.680
Mini NS 12+1	498	260-300hp				4.436	4.865



OTHER PRODUCTS

In the UK range



**CLASSIC REVERSIBLE
PLOUGHS**



**XPERIENCE REVERSIBLE
PLOUGHS**



**SEMI-MOUNTED REVERSIBLE
PLOUGHS**



VERSATILL



A PASSION FOR SOIL



 *Profit from our knowledge*

OPICO is committed to support your machine throughout its working life.

A full range of genuine OVLAC wearing parts are available from your local dealer.

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