

Rigid and Folding Power Harrows




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POWER HARROWS

MASCHIO

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MASCHIO ... more tines for more tilth



Maschio have been producing power harrows for over 50 years and offer one of the most comprehensive and reliable ranges in the market. There is a power harrow suitable for all situations with the range catering to both small and large scale farms.

Maschio build 3 key features into every power harrow: **STRENGTH, RELIABILITY and EASY MAINTENANCE.**

The **STRENGTH** and **RELIABILITY** comes from using only the highest quality components. Maschio make most of the key components in house, including rotors, tines and transmission troughs ensuring quality control. In fact one tine rolls off the production line every 6 seconds!

EASY MAINTENANCE is a feature built into every Maschio product and is considered to be an essential element of the design process. Maschio make it their mission to make machines that are easy to maintain and operate. The Power Harrow "QuickFit" tines are a prime example of this philosophy, allowing the tines to be changed in seconds. "Easy rotor access" is another example whereby the rotor bearings and seals can be accessed without the need to strip the complete transmission trough.

Maschio power harrows have also been purposefully designed to be fully compatible with Maschio seed drills enabling a wide choice of "combination drill" options to suit all requirements.

OPICO have been working with Maschio Gaspardo S.p.A since 2011 and have built up a nationwide dealer network for the Maschio Gaspardo range of products including UNICO plough, rotary cultivators, grain drills, precision drills, flail mowers and hedge cutters. OPICO prides itself on delivering excellent service back-up and works closely with Maschio Gaspardo in developing and testing products for the UK market. Each year OPICO runs a programme of dealer sales and service training to make sure that all Maschio Gspardo customers are fully supported in the UK.

Trough Strength

As with any machine the strength of the chassis or in this case trough is critical because it is what all the other components are mounted on and what holds the machine together. Maschio's double-skinned trough makes the harrow more rigid and prevents it from twisting or bending, without any significant increase in weight. The double-skinned trough, featuring an exclusive design, is made from high-strength steel.



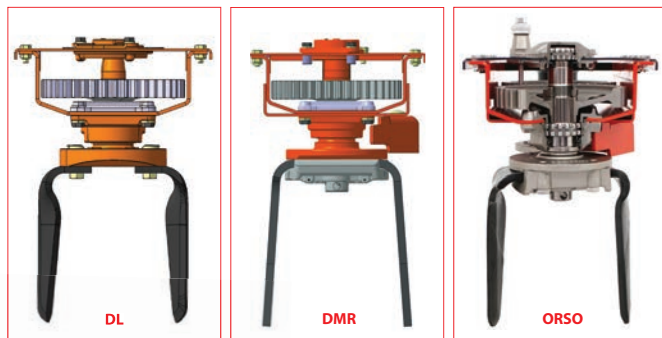
Gearbox Strength

Made in house by Maschio the central, side or transfer gearboxes are all built with as few gears as possible, reducing friction in favour of lower fuel consumption. The bevel gears feature large gears with helical teeth: increasing the contact surface reduces the play inside the gearbox - the key component that transmits power through the working parts of the machine.



Rotor Design

Maschio's basic rotor design is replicated throughout the range, it features high quality bearing sets at the top and bottom of the rotor shaft to ensure they can cope with the torsional forces applied through the tines in heavy work.



Labyrinth seals protect the bearings from dust ingress and the machine from oil leakage whilst the pressed rotor shafts and gears run in the oil filled transmission trough.

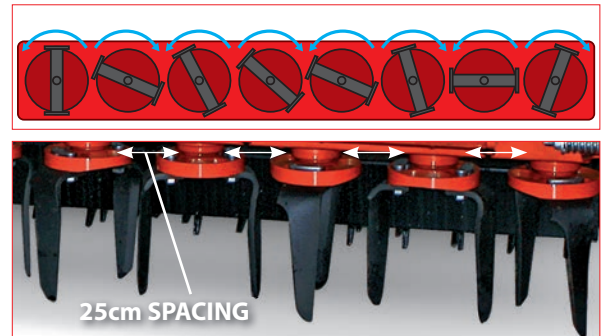
Easy Maintenance

One of the key features designed into every Maschio power harrow model is the ease of maintenance, from utilising a simple dip stick combined with breather to check oil levels, to **easy access bearings that can be changed without full disassembly of the trough.**



Timing and Number of Rotors

Maschio Power Harrow rotors are all timed sequentially meaning that there is a gradual utilisation of power by the machine reducing stress on both machine and tractor whilst economising diesel usage in work.

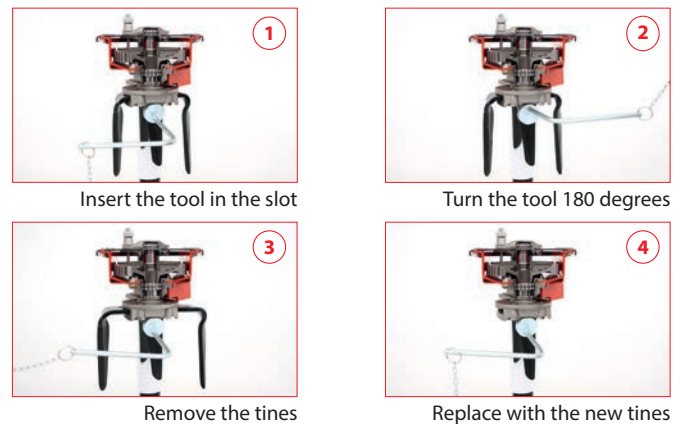


More tines for more tilth

The closer rotor spacing of just 25cm (12 rotors in 3m) helps spread the torque better, reducing power draw. The rotors' special timing means the tools dig into the soil to be tilled gradually, making it considerably easier for them to work their way through the soil and limiting vibration significantly.

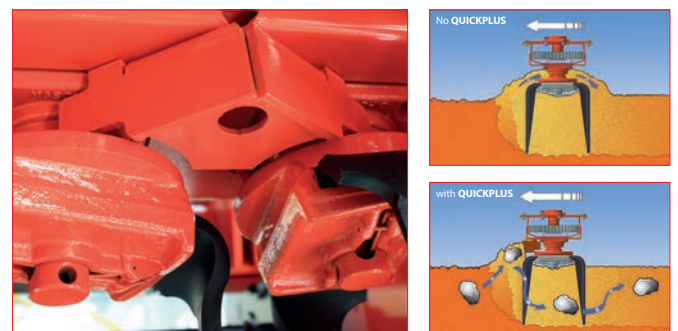
Placing rotors at a distance of 25cm from each other - unlike the competition who use wider spacing - results in much better soil finishing. More rotors per metre means more tines and more tines means a finer seedbed is prepared in one pass.

QUICKFIT Rapido tines



QUICKPLUS Stone deflector

QUICKPLUS is a bolt on stone deflector. The protective wedge-shaped deflectors are bolted onto the trough's outer skin, protecting the space between the rotors from being hit by rocks or other debris, stopping such foreign objects from getting inside and potentially jamming the rotors. This system offers total protection, though when working on hazard-free ground the stone deflectors can still be removed for improved soil flow.



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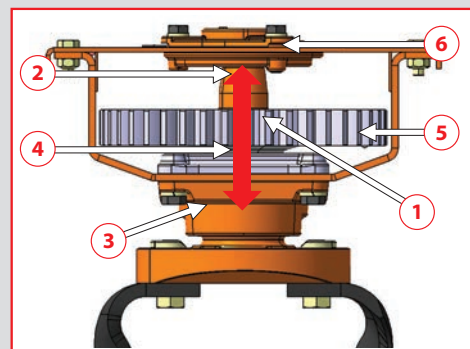
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QUICK MATCH TO A DRILL Back Cover



ROTOR SPECIFICATION

- ① **Pressed spline** The rotor splines are pressed into the shaft not machined, resulting in much stronger teeth and a more robust rotor shaft capable of transmitting higher torque.
- ② **50mm rotor** The 50mm rotor shaft gives added strength to the driveline ensuring years of trouble free operation.
- ③ **Seals** The Labyrinth seal guarantees a perfect seal allowing both bearings to be maintenance-free.
- ④ **Stress distribution** The Maschio rotor system has a long shaft and reinforced bearings that are spaced as far apart as possible to cope with the twisting force and torque applied to the rotor.
- ⑤ **Submerged gears** Hardened gears submerged in oil transfer the power from the driveline to the rotor tines.
- ⑥ **Easy access bearings** Each rotor has a separate cover which allows the bearings to be checked or changed without the need of completely removing the whole transmission trough cover.



MODEL SPECIFICATIONS

| | DELFINO DL 30 -100 hp | | |
|-----------------------------|--------------------------|---------|---------|
| Model | 1300 | 1500 | 1800 |
| HP | 30-100 | 35-100 | 45-100 |
| Working Width cm | 130 | 150 | 180 |
| Total Width cm | 136 | 160 | 185 |
| Transport Width (folded) cm | • | • | • |
| No. of Tines | 10 | 12 | 14 |
| Working Depth cm | 28 | 28 | 28 |
| Weight kg* | 561 | 536 | 694 |
| Shaft Diameter mm | 50 | 50 | 50 |
| PTO/RPM | 540/290 | 540/290 | 540/290 |

*Weight includes: 450mm Packer Roller

STANDARD DUTY POWER HARROW

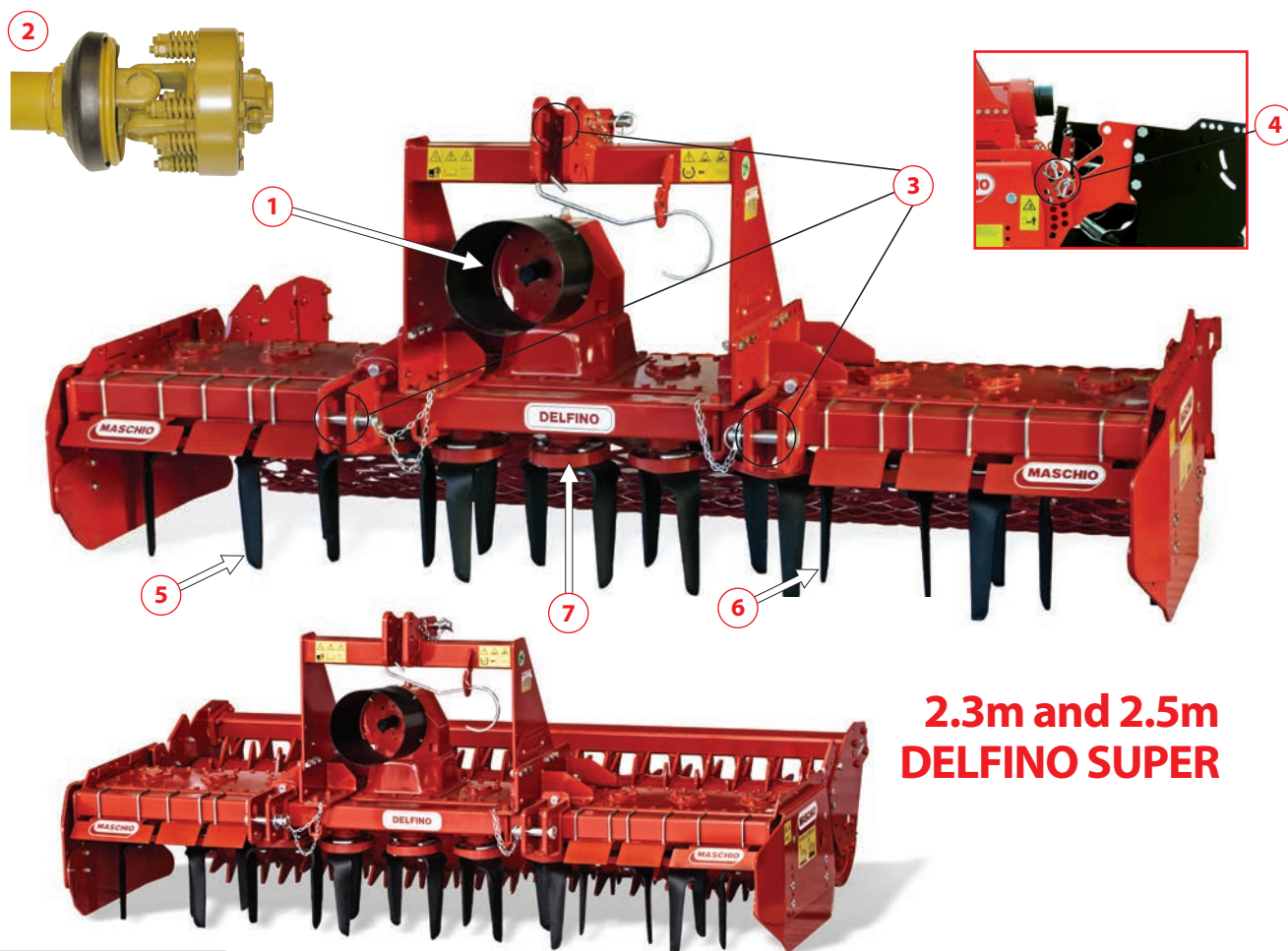
DELFINO DL & DELFINO SUPER

30 - 120 hp

The DELFINO range of power harrows has been designed for smaller farms and cultivation in specialised areas such as vineyards, amenity and orchards where the width of the machine is very important.

As most of the tractors used in these areas are low horse power, the DELFINO range is relatively light, plus the specially designed tines allow the soil to be broken up with as little as 30hp on the smaller machines.

All in all the DELFINO DL & DELFINO SUPER are low horse power machines packed with big features similar to those seen on the full range of Maschio rigid power harrows.



**2.3m and 2.5m
DELFINO SUPER**

| | DELFINO SUPER 65 - 120 hp | |
|---------|------------------------------|---------|
| | 2300 | 2500 |
| 2000 | 2300 | 2500 |
| 60-100 | 65-120 | 70-120 |
| 200 | 230 | 260 |
| 210 | 234 | 269 |
| . | . | . |
| 16 | 18 | 20 |
| 28 | 28 | 28 |
| 770 | 927 | 1008 |
| 50 | 50 | 50 |
| 540/290 | 540/352 | 540/352 |

1 Gearbox The DELFINO DL + DELFINO SUPER power harrows come with a strong single speed gearbox with 540rpm input giving 290rpm rotor revs.

2 PTO shaft Comes with a standard shear bolt protected PTO shaft but can be supplied with a PTO slip clutch as an optional extra.

3 Linkage mounting The 1300 and 1500 model comes as standard with Cat I 3 point hitches, the 1800 - 2500 come as standard with Cat II hitches.

4 Depth control The working depth of the rotors is controlled by a clever pin system which gives you a large range of depth adjustment.

5 Number of rotors 25cm spacing between the rotors gives Maschio power harrows more rotors than many other power harrows on the market today, it also lowers the horsepower requirement and most importantly leaves a finer tilth.

6 Timing of rotors (19°) The tine rotors are all positioned at different angles which allow the power harrow to gradually dig into the soil reducing the vibration transmitted to the tractor and reducing peak loads on the driveline resulting in smoother operation and less fuel consumption.

7 Bolt-on tines The DELFINO range utilises cost effective bolt on specially designed tines. Tine length 28cm, thickness 12mm and are made from specially tempered Swedish boron steel.



MEDIUM DUTY POWER HARROWS

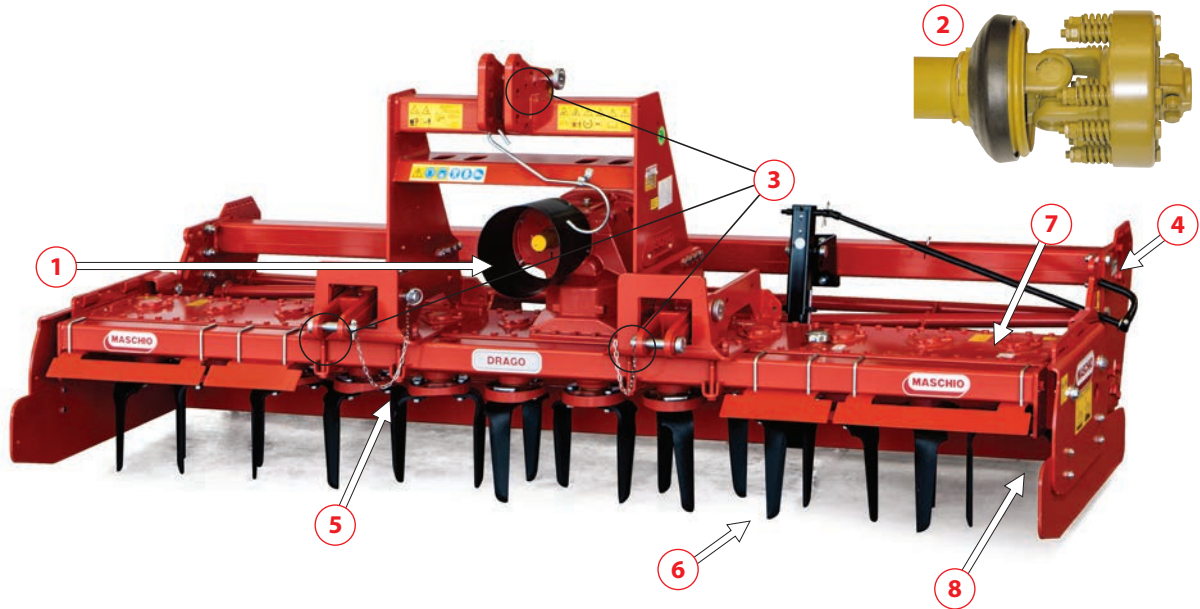
DRAGO DC

80 - 150 hp

The DRAGO DC power harrow is designed to suit small to medium size farms, with tractors ranging from 80 - 150 hp.

It's light weight but very sturdy due to the strength built into the design of the machine. It also has a large range of accessories and can be used in combination with a seed drill.

This makes the DRAGO DC a excellent choice for low to medium horse power tractors.

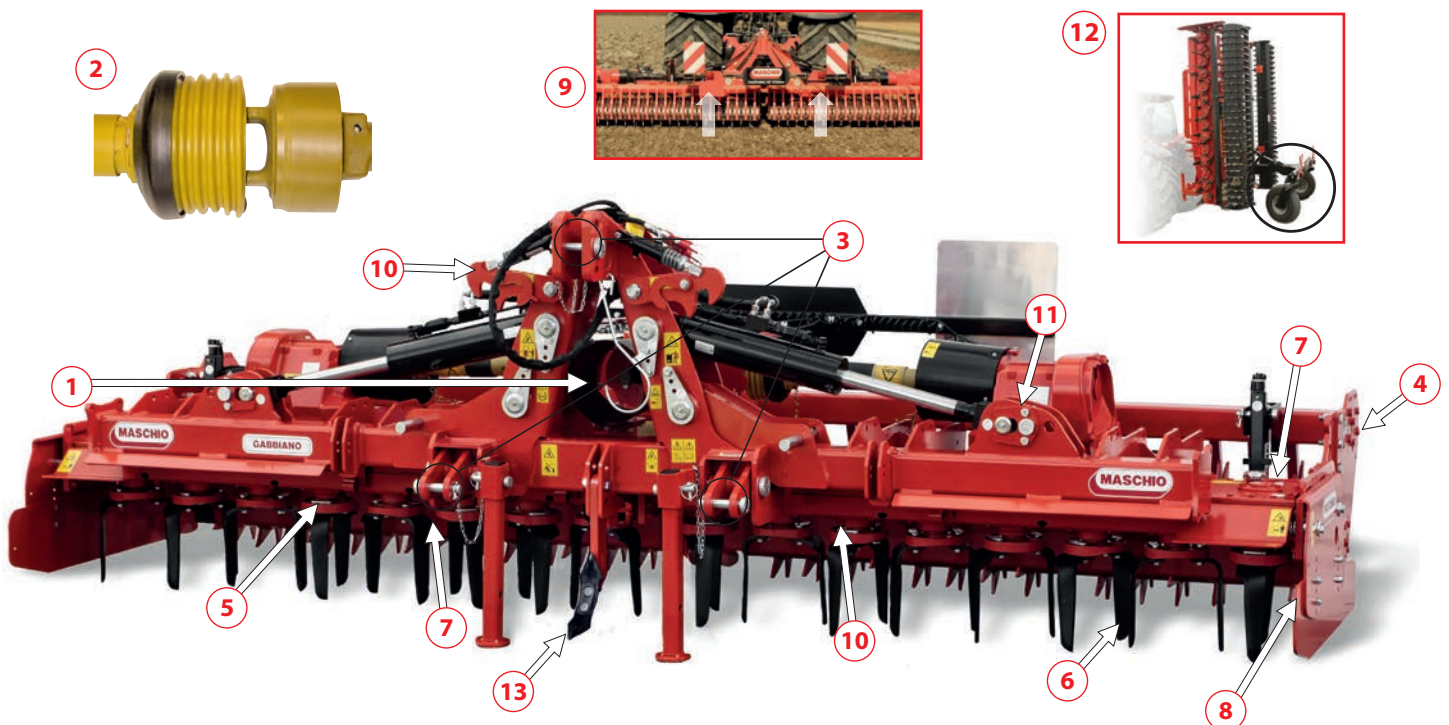


GABBIANO

120 - 260 hp

The GABBIANO power harrow is recommended for medium to large farms, offering 4m and 5m models.

It's robust, but light enough to use with tractors ranging from 120 - 260 hp. The GABBIANO is the hydraulic folding version of the DRAGO DC but comes with some additional features which include a multi-speed gearbox allowing the operator to change the rotor rpm to suit different working requirements.



ROTOR SPECIFICATIONS

MASCHIO

1 Gearbox The DRAGO DC and GABBIANO power harrows come with multi-speed 540/1000 rpm gearboxes with interchangeable sets of gears. The DRAGO DC gearbox also has a spline at either end and can be used as either a rear or front mounted machine.

2 PTO shaft The DRAGO DC is supplied with a standard slip clutch PTO shaft (1 3/8" 6 spline tractor side yoke). The GABBIANO is supplied with a standard cam clutch PTO shaft (1 3/8" 21 spline tractor side yoke).

3 Linkage mounting Cat II three point swinging hitches allow the machine to be connected to the tractor with ease and prevent heavy stresses when working on undulating ground.

4 Depth control A simple pin system controls the depth as standard. Hydraulic depth control is available as an option.

5 Number of rotors 25cm spacing between the rotors gives more rotors and therefore more tines than many other power harrows lowering the horsepower requirement and providing a finer tilth.

6 Timing of rotors (19°) Different angles on the tine rotors allow the harrow to gradually dig into the soil reducing the vibration and reducing peak loads on the driveline resulting in smoother operation and less fuel consumption.

7 Double skin trough The DRAGO DC and GABBIANO come with a double skin transmission trough consisting of an inner 6mm steel trough and a 5mm outer skin, resulting in 11mm thickness in total. The outer skin prevents stones and other objects damaging the inner skin and also gives a huge amount of strength to the main trough which needs to cope with the power that is transmitted through the drive line and all the stresses and vibrations during work.

8 Side dampeners The extra long side guards prevent soil spilling from the side of the power harrow and leaving ridges and lines during work. The guards have built in spring dampeners that absorb collisions from large stones preventing damage.

9 Rear lights Transports lights and safety reflectors as standard on folding machines.

10 Transport locks GABBIANO: The lock/unlock is automatic allowing the operator to be in the cab safely away from the power harrow during folding and unfolding.

11 Floating wing locks The floating device guarantees a constant working depth on undulating ground and gives the GABBIANO 3° upward movement on each wing. The floating function can be deactivated by simply moving the locking pin to the locked position.

12 Transport width The GABBIANO power harrow folds to 2.22m for safe road transport. Optional transport trolley available.

13 Central ridge tine Ensures the soil is fully cultivated across the whole working width.

1 Pressed spline The rotor splines are pressed not machined, resulting in much stronger teeth and a more robust rotor shaft capable of transmitting higher torque.

2 Hardened rotor The rotor shaft is made from the highest quality carbon steel.

3 50mm rotor The 50mm rotor shaft gives added strength to the driveline ensuring years of trouble free operation.

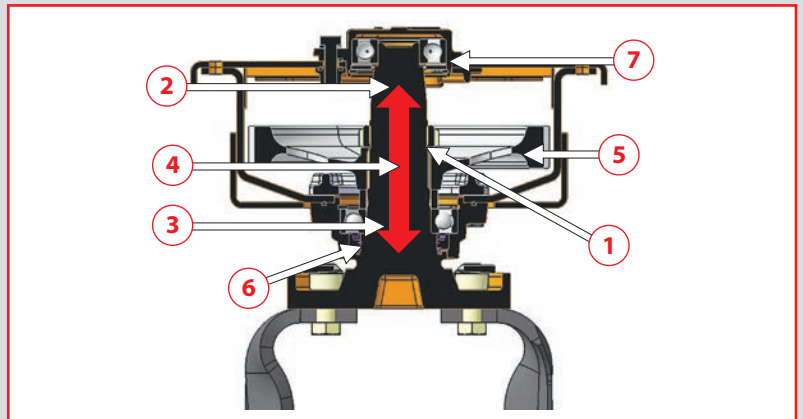
4 Stress distribution The Maschio rotor system has a long shaft and reinforced bearings that are spaced as far apart as possible to cope with the twisting force and torque applied to the rotor to deliver excellent stability

5 Hardened gears Hardened gears submerged in oil transfer the power from the driveline to the rotor tines.

6 Seals The Labyrinth seal is made from cellular polyurethane and guarantees a perfect seal allowing both bearings to be maintenance-free.



7 Easy access bearings Each rotor has a separate cover which allows the bearings to be checked or changed without the need of completely removing the whole transmission trough cover.



MODEL SPECIFICATIONS

| | DRAGO DC 80-150 hp | | GABBIANO 120-260 hp | |
|-----------------------------|-------------------------|-------------------------|---------------------|----------|
| Model | 2500 | 3000 | 4000 | 5000 |
| HP | 80-150 | 90-150 | 120-260 | 120-260 |
| Working Width cm | 260 | 300 | 400 | 500 |
| Total Width cm | 263 | 312 | 406 | 506 |
| Transport Width (folded) cm | • | • | 222 | 222 |
| No. of Tines | 20 | 24 | 32 | 40 |
| Working Depth cm | 28 | 28 | 28 | 28 |
| Weight kg* | 1197 | 1349 | 2240 | 2540 |
| Shaft Diameter mm | 50 | 50 | 50 | 50 |
| PTO/RPM | 540/193-353 1000/357 | 540/193-353 1000/357 | 1000/357 | 1000/357 |

*Weights are for models fitted with a 500mm Packer Roller.

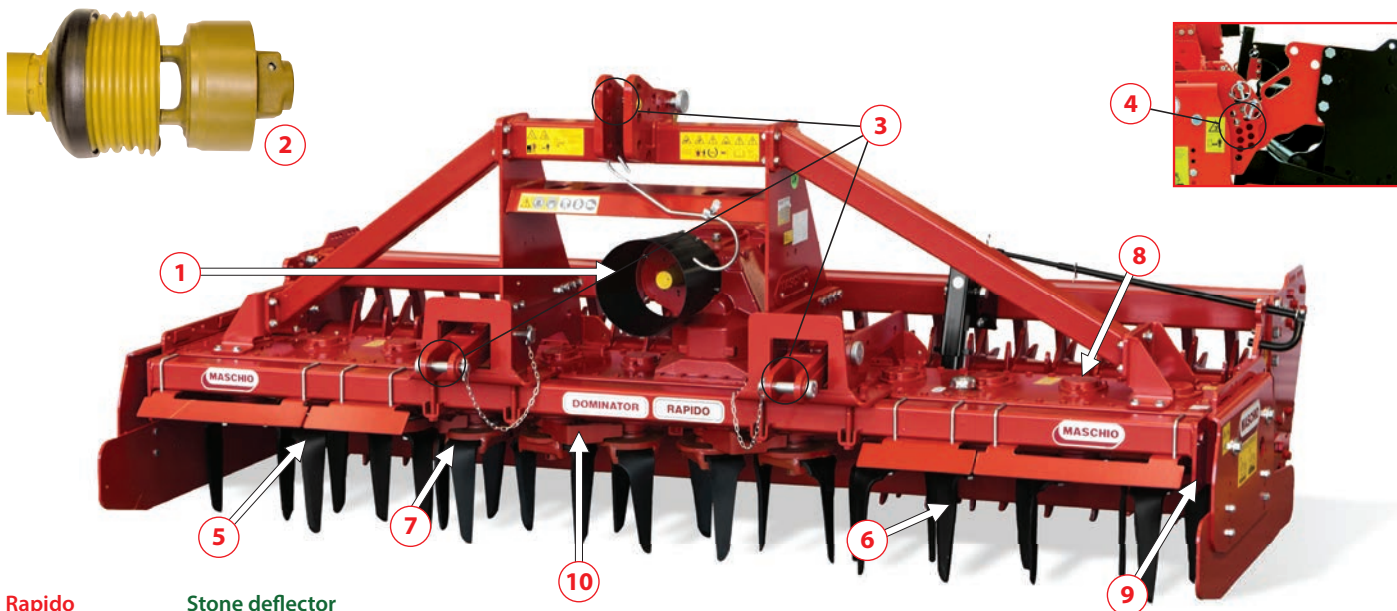
HEAVY DUTY POWER HARROWS

DOMINATOR DM Rapido (DMR)

120 - 200 hp

The DOMINATOR DMR Rapido power harrow range is designed to suit medium to large sized farms and medium to high horse power tractors ranging from 120-200hp.

This Power Harrow is a popular choice to be used in drill combinations, with its heavy duty build and the option of using ON-GRIP tines this also makes the DOMINATOR DM a great choice for use on uncultivated land.



Rapido Stone deflector
QUICKFIT QUICKPLUS

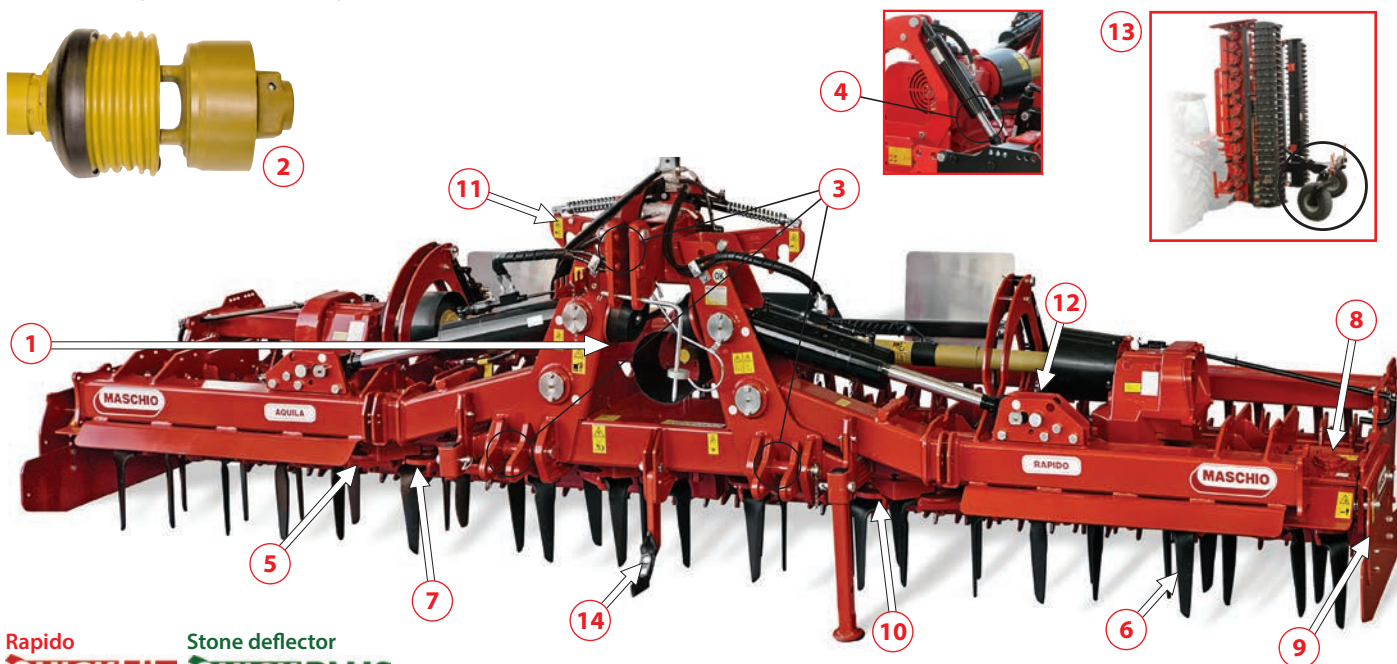
AQUILA Rapido

160 - 330hp

The AQUILA Rapido power harrow is designed to suit the requirements of large size farms and contractors and is available in 4m, 5m and 6m working widths.

With its robust design and large multi-speed gearboxes it can be used with tractors up to 330hp.

It comes standard with a multi-speed gearbox allowing the operator to change the rotor rpm to suit different working requirements. It also comes with QUICKFIT tines and QUICKPLUS stone deflectors.



Rapido Stone deflector
QUICKFIT QUICKPLUS

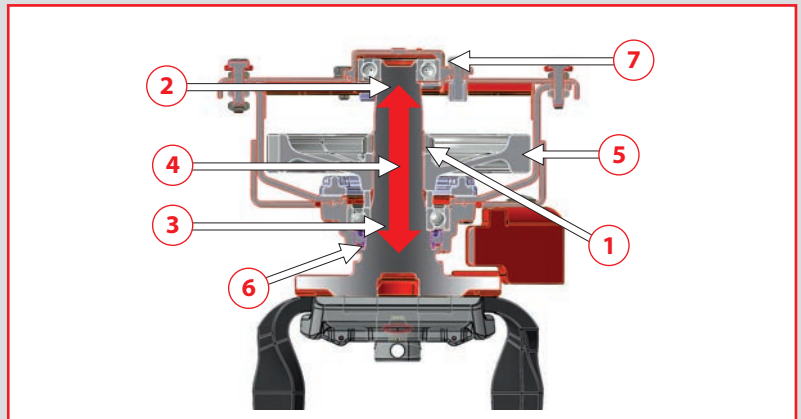
Rear lights as standard

ROTOR SPECIFICATIONS

MASCHIO

- 1 **Gearbox** The DOMINATOR DMR and AQUILA power harrows come with a multi-speed 540/1000 rpm gearbox with interchangeable sets of gears. The gearbox also has a spline at either end so the DOMINATOR DMR can be used as either rear or front mounted and it also allows for another PTO driven machine to be mounted and used behind it.
- 2 **PTO shaft** The DOMINATOR DMR and AQUILA are supplied in the UK with a standard cam clutch PTO shaft (1 3/8" 21 spline tractor side yoke).
- 3 **Linkage mounting** Cat II three point swinging hitches allow the machine to be connected to the tractor with ease and prevent heavy stresses being applied to the power harrow and tractor when working on undulating ground as the swinging hitches allow the machine to float whilst still being securely attached to the tractor.
- 4 **Depth control** A simple pin system controls the depth as standard on the Dominator DMR. Hydraulic depth control is standard on AQUILA.
- 5 **Number of rotors** 25cm spacing between the rotors gives more rotors and tines than many other power harrows, lowering the horsepower requirement and producing a finer tilth.
- 6 **Timing of rotors** (19°) Different angles on the tine rotors allow the harrow to gradually dig into the soil reducing the vibration and reducing peak loads on the driveline resulting in smoother operation and less fuel consumption.
- 7 **QUICKFIT Rapido** tine system allows the user to replace rotor tines quickly with one turn of the QUICKFIT tool, this minimises downtime and increases safety.
- 8 **Double skin trough** The DOMINATOR DMR and AQUILA Power Harrows come with the double skin transmission trough consisting of an inner 6mm steel trough and a 5mm outer skin, resulting in 11mm thickness in total. The outer skin prevents stones and other objects damaging the inner skin and also gives a huge amount of strength to the main trough, which needs to cope with the power that is transmitted through the drive line and all the stresses and vibrations during work.
- 9 **Side dampeners** The extra long side guards prevent soil spilling from the side of the power harrow and leaving ridges and lines during work. The guards have built in spring dampeners to absorb collisions from large stones to prevent damage.
- 10 **QUICKPLUS stone deflectors** are a bolt on shield system which fits just in front of the rotor as it comes out of the transmission trough, preventing stones and debris colliding with the rotor and gearbox, in turn this helps to push the stones down to the lower cultivated area.
- 11 **Transport locks** AQUILA: The lock/unlock is automatic allowing the operator to be in the cab safely away from the power harrow during folding and unfolding.
- 12 **Floating wing locks** The floating device guarantees constant working depth on undulating ground and gives the AQUILA Rapido 3° upward movement on each wing. The floating function can be deactivated by simply moving the locking pin to the locked position. A downward floating facility can be specified as an option.
- 13 **Transport width** The AQUILA Rapido power harrow folds to 2.4m for safe road transport.
- 14 **Central ridge tine** Ensures the soil is fully cultivated across the whole working width.

- 1 **Pressed spline** The rotor splines are pressed not machined, resulting in much stronger teeth and a more robust rotor shaft capable of transmitting higher torque.
- 2 **Hardened rotor** The rotor shaft is made from 42 CrMo 4, hardened and tempered at 300 HB, which can increase its life by up to 62%.
- 3 **55mm rotor** The 55mm rotor shaft gives added strength to the driveline ensuring years of trouble free operation.
- 4 **Stress distribution** The Maschio rotor system has a long shaft and reinforced bearings that are spaced as far apart as possible to cope with the twisting force and torque applied to the rotor to deliver excellent stability.
- 5 **Hardened gears** Hardened tempered gears submerged in oil transfer the power from the driveline to the rotor tines.
- 6 **Seals** The Labyrinth seal is made from cellular polyurethane and guarantees a perfect seal allowing both bearings to be maintenance-free.
- 7 **Easy access bearings** Each rotor has a separate cover which allows the bearings to be checked or changed without the need of completely removing the whole transmission trough cover.



MODEL SPECIFICATIONS

| | DOMINATOR DMR 120-200 hp | | | AQUILA Rapido 160-330 hp | | |
|-----------------------------|--------------------------|-------------------------|-------------------------|--------------------------|----------|----------|
| Model | 3000 | 3500 | 4000 | 4000 | 5000 | 6000 |
| HP | 120-200 | 130-200 | 140-200 | 160-250 | 160-330 | 180-330 |
| Working Width cm | 300 | 350 | 400 | 400 | 500 | 600 |
| Total Width cm | 312 | 362 | 411 | 412 | 512 | 612 |
| Transport Width (folded) cm | . | . | . | 240 | 240 | 240 |
| No. of Tines | 24 | 28 | 32 | 32 | 40 | 48 |
| Working Depth cm | 28 | 28 | 28 | 28 | 28 | 28 |
| Weight kg* | 1496 | 1669 | 1841 | 2760 | 2980 | 3570 |
| Shaft Diameter mm | 55 | 55 | 55 | 55 | 55 | 55 |
| PTO/RPM | 540/193-353 1000/357 | 540/193-353 1000/357 | 540/193-353 1000/357 | 1000/357 | 1000/357 | 1000/357 |

*Weight includes: DOMINATOR 500mm Packer Roller, AQUILA 500mm Packer Roller

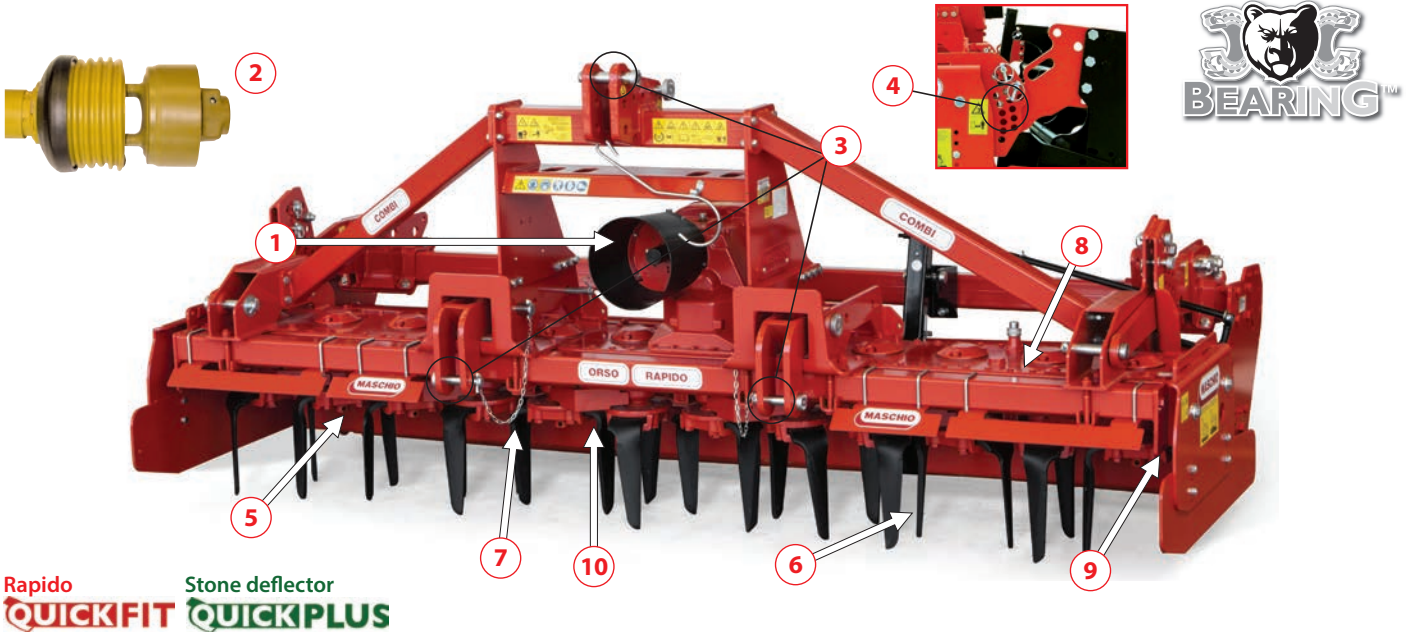
EXTRA HEAVY DUTY POWER HARROWS

ORSO Rapido

120 - 300 hp

The ORSO Rapido is the top rigid model in the Maschio Power Harrow range. Not only does the ORSO model have QUICKFIT tines and QUICKPLUS stone deflectors as standard it has been designed for the most arduous conditions. Furthermore the ORSO model comes as standard as a "combi" version which means it is prepared to be coupled with Maschio drills. This power harrow suits tractors ranging from 120-300 hp. The ORSO Rapido has also been tested to the extreme from running the rotors continuously in a mud bath to check the sealing system, to heavy shock testing by running the machine in quarry whilst carrying additional weight.

When designing the ORSO model Maschio introduced a new style double rail barrel bearing that gives high load capacity and up to 30% extended life compared to traditional taper roller bearings.



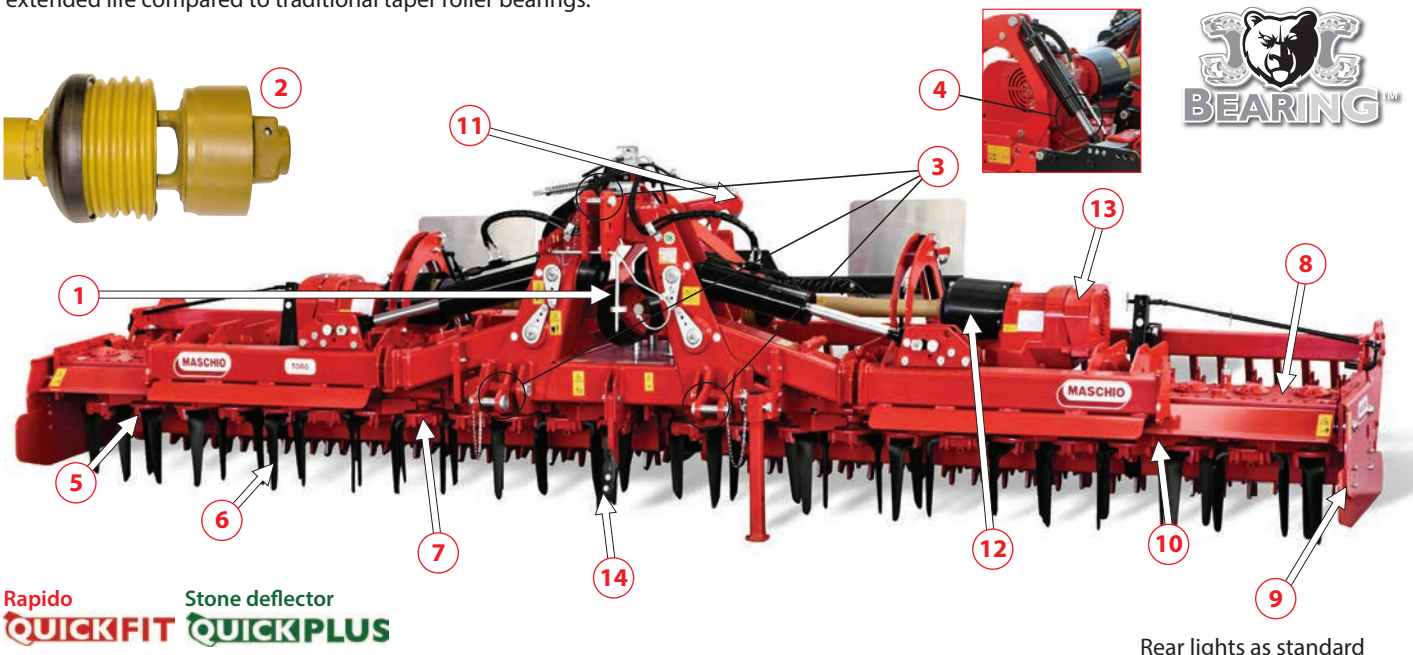
TORO Rapido

180 - 400 hp

The TORO Rapido is based on the ORSO rigid model, it is primarily for contractors and large farms with the need to work in demanding stony conditions and is available in 5m, 6m or 7m working widths.

The TORO comes as standard with a multi-speed gearbox with two sets of gears allowing the operator to change the rotor rpm to suit different working requirements. It also comes with QUICKFIT tines and QUICKPLUS stone deflectors.

When designing the TORO model Maschio introduced a new style double rail barrel bearing that gives high load capacity and up to 30% extended life compared to traditional taper roller bearings.



Rear lights as standard

ROTOR SPECIFICATIONS

MASCHIO

1 Gearbox The ORSO and TORO power harrows utilise a high power multi-speed gearbox with hardened tempered gears which is capable of transmitting up to 250 hp (186 kW) on the ORSO and 380 hp (283 kW) on the TORO. An extra set of gears comes as standard allowing the operator to alter the ratio and choose from either 350 rpm (standard: 16-22 gear set) or 300 rpm (15-24 gear set). The Gearbox also has a spline at either end so it can be used as either rear or front mounted or run another PTO driven machine mounted on the harrow.

2 PTO shaft The ORSO and TORO come as standard with a cam PTO shaft (1 3/8" 20 spline tractor side). Side cam clutch on the Toro.

3 Linkage mounting ORSO's Cat II and TORO's Cat III three point swinging hitches allow the machines to be connected to the tractor with ease and prevent heavy stresses being applied to the power harrow and tractor when working on undulating ground as the swinging hitches allow the machine to float whilst still being securely attached to the tractor.

4 Depth control The ORSO utilises a simple pin system to control the depth. Hydraulic depth control is available as an option. The TORO uses two hydraulic cylinders with an auto balancing system to control the depth (4 rows on the 7m).

5 Number of rotors 25cm spacing between the rotors gives more rotors per metre than many other power harrows, lowering the horsepower requirement and producing a finer tilth.

6 Timing of rotors (19°) Different angles on the tine rotors allow the harrow to gradually dig into the soil reducing the vibration and reducing peak loads on the driveline resulting in smoother operation and less fuel consumption.

7 QUICKFIT Rapido tine system allows the user to replace rotor tines quickly with one turn of the QUICKFIT tool, this minimises downtime and increases safety.

8 Double skin trough The double skin transmission trough consists of an inner 6mm steel trough and a 5mm outer skin, resulting in 11mm thickness in total. The outer skin prevents stones and other objects damaging the inner skin and also gives a huge amount of strength to the main trough which needs to cope with the power that is transmitted through the drive line and all the stresses and vibrations during work.

9 Side dampeners The extra long side guards prevent soil spilling from the side of the power harrow and leaving ridges and lines during work. The guards have built in spring dampeners that absorb the collisions from large stones to prevent damage being caused to the guards.

10 QUICKPLUS stone deflectors are a bolt on shield system which fits just in front of the rotor as it comes out of the transmission trough, preventing stones and debris colliding with the rotor and gearbox, in turn this helps to push the stones down to the lower cultivated area.

11 Transport locks TORO: The lock/unlock is automatic allowing the operator to be in the cab safely away from the power harrow during folding and unfolding.

12 Floating wing locks The floating system guarantees constant working depth on undulating ground by giving the TORO power harrow 3° upward and 3° downwards (option) movement on each wing. This float can be deactivated by using the hydraulic locking system from inside the tractor cab.

13 Gearbox cooling system Side gearboxes are fitted with an integral fan, allowing the gearboxes to be completely self contained with no need for separate oil coolers, fans and extra pipe work routed around the machine that could be damaged and cause the gearbox to fail.

14 Central ridge tine Ensures the soil is fully cultivated across the whole working width.

1 Pressed spline The rotor splines are pressed not machined, resulting in much stronger teeth and a more robust rotor shaft capable of transmitting higher torque.

2 Hardened rotor The rotor shaft is made from 42 CrMo 4, hardened and tempered at 300 HB, which can increase its life by up to 62%.

3 55mm rotor The 55mm rotor shaft gives added strength to the driveline ensuring years of trouble-free operation.

4 Stress distribution The Maschio rotor system has a long shaft and reinforced SKF bearings that are spaced as far apart as possible to cope with the twisting force and torque applied to the rotor.

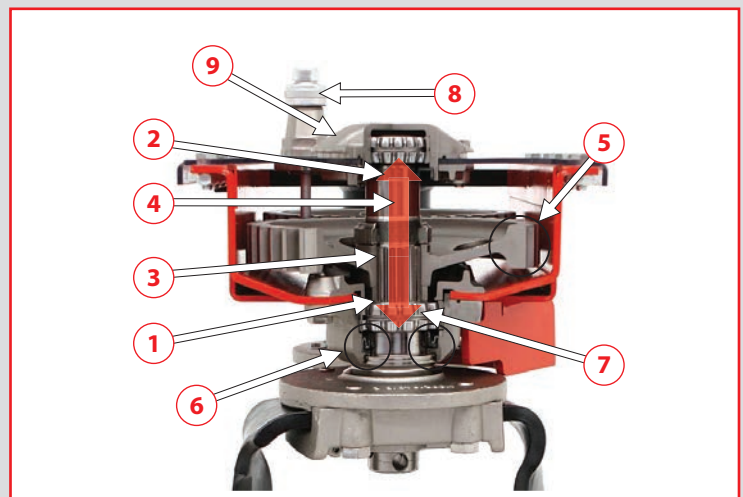
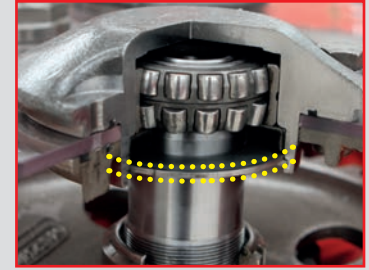
5 Hardened gears Hardened tempered gears submerged in oil transfer the power from the driveline to the rotor tines.

6 Seals The Labyrinth cassette seal is made from cellular polyurethane and guarantees a perfect seal allowing the bottom bearing to be maintenance-free.

7 Reinforced Bearings Each bearing has a double rail consisting of two rows of spherical or barrel bearings to ensure high strength and greater stability.

8 Oil dipstick The integrated dipstick with built in breather allows oil levels to be checked and controlled easily.

9 Easy access bearings Each rotor has a separate cover which allows the bearings to be checked or changed without the need of completely removing the whole transmission trough cover.



MODEL SPECIFICATIONS

| | ORSO 120-300 hp | | | TORO 160-400 hp | | |
|-----------------------------|-----------------|----------|----------|-----------------|----------|----------|
| Model | 3000 | 3500 | 4000 | 5000 | 6000 | 7000 |
| HP | 120-300 | 130-300 | 140-300 | 160-400 | 180-400 | 250-400 |
| Working Width cm | 300 | 350 | 400 | 500 | 600 | 700 |
| Total Width cm | 312 | 362 | 411 | 512 | 612 | 712 |
| Transport Width (folded) cm | . | . | . | 245 | 245 | 245 |
| No. of Tines | 24 | 28 | 32 | 40 | 48 | 56 |
| Working Depth cm | 28 | 28 | 28 | 28 | 28 | 28 |
| Weight kg* | 1720 | 1890 | 1990 | 3366 | 3748 | 4248 |
| Shaft Diameter mm | 55 | 55 | 55 | 55 | 55 | 55 |
| PTO/RPM | 1000/350 | 1000/350 | 1000/350 | 1000/350 | 1000/350 | 1000/350 |

*Weight includes: ORSO 500mm Packer Roller, TORO 500mm Packer Roller

ULTRA HEAVY DUTY POWER HARROWS

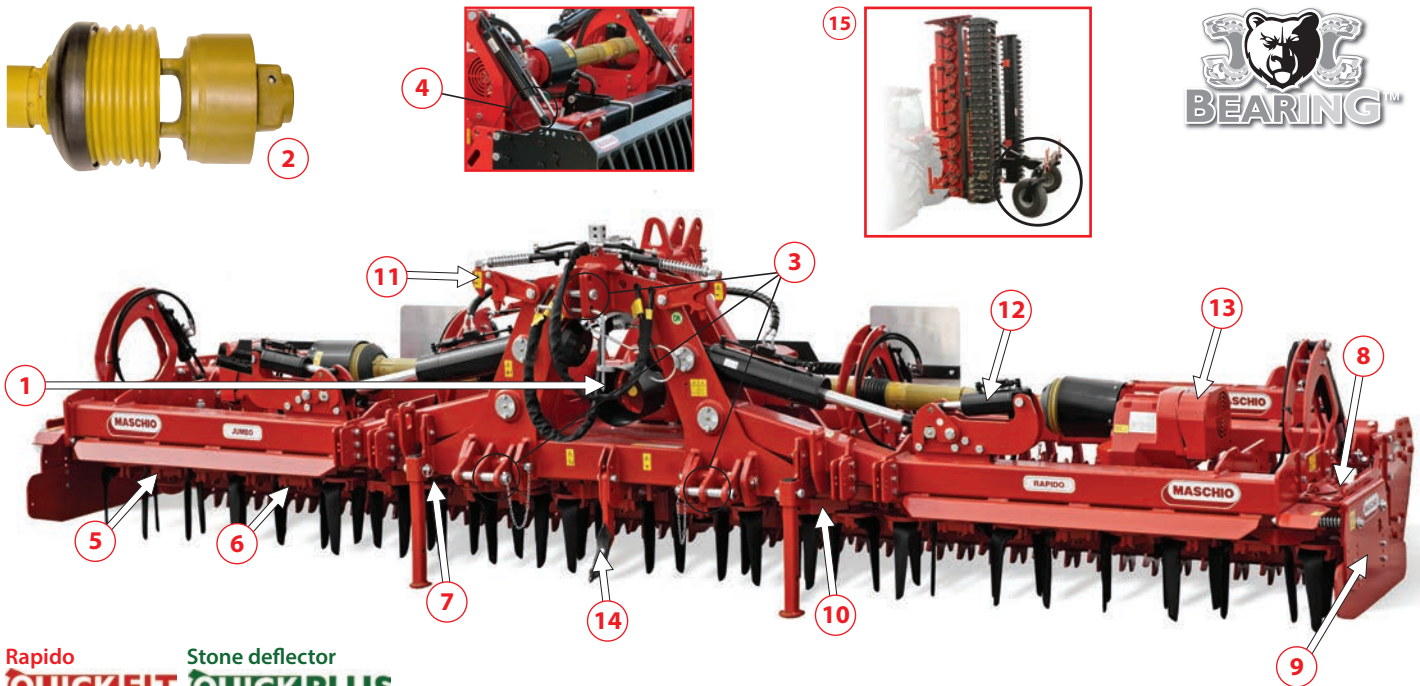
JUMBO Rapido

250 - 550 hp

The JUMBO Rapido is the flagship ULTRA HD model, the biggest, strongest and the best hydraulic folding range of power harrows. It is available in working widths of 6m, 7m and 8m yet still folds to 2.45m for easy and safe road transport. Suitable for the most extreme working conditions the Jumbo is primarily designed for contractors and large scale farmers working in heavy stony soils.

It comes as standard with a multi-speed gearbox that is capable of transferring up to 550 hp and QUICKFIT tines and QUICKPLUS stone deflectors.

The Jumbo utilises the heavier maschio design that includes double rail barrel bearings for the top and bottom of the rotor, new improved sealing systems and heavy duty gears and rotor to name just a few.



Rapido Stone deflector
QUICKFIT QUICKPLUS

1 Gearbox High power gearboxes with the central gearbox using high strength helical gears, synthetic oil, built in oil coolers and hardened tempered gears. Capable of transmitting up to 550 hp. An extra set of gears allows 350 rpm at PTO 1000 rpm.

2 PTO shaft The JUMBO comes as standard with a central heavy duty P700 cam clutch PTO shaft (1 $\frac{3}{8}$ " 20 spline tractor side) and with two heavy duty side cam clutch PTO shafts.

3 Linkage mounting Cat III and IV cast iron three point swinging hitches with cat IV reduction brushes allow the machine to be connected to the tractor with ease and also prevent heavy stresses when working on undulating ground.

4 Depth control Uses 4 hydraulic cylinders with an auto balancing system to control the depth of the rear roller and make sure it always runs level.

5 Number of rotors 25cm spacing between the rotors gives more rotors per metre than many other power harrows, lowering the horsepower requirement and producing a finer tilth.

6 Timing of rotors (19°) Different angles on the tine rotors allow the harrow to gradually dig into the soil reducing the vibration and reducing peak loads on the driveline resulting in smoother operation and less fuel consumption.

7 QUICKFIT Rapido tine system allows the user to replace rotor tines quickly with one turn of the QUICKFIT tool, this minimises downtime and increases safety.

8 Double skin trough The JUMBO power harrow comes with the double skin transmission trough consisting of an inner 6mm steel trough and a 5mm outer skin, resulting in 11mm thickness in total. The outer skin prevents

stones and other objects damaging the inner skin and also gives a huge amount of strength to the main trough, which needs to cope with the power that is transmitted through the drive line and all the stresses and vibrations during work.

9 Side dampers The extra long side guards prevent soil spilling from the side of the power harrow and leaving ridges and lines during work. The guards have built in spring dampeners that absorb collisions from large stones and prevent damage.

10 QUICKPLUS stone deflectors are a bolt on shield system which fits just in front of the rotor as it comes out of the transmission trough, preventing stones and debris colliding with the rotor and gearbox, in turn this helps to push the stones down to the lower cultivated area.

11 Transport locks The lock/unlock is automatic allowing the operator to be in the cab safely away from the power harrow during folding and unfolding.

12 Floating wing locks The floating system guarantees constant working depth on undulating ground giving the JUMBO power harrow 3° upward and 3° downwards movement on each wing. This float can be deactivated by using the hydraulic locking system from inside the tractor cab.

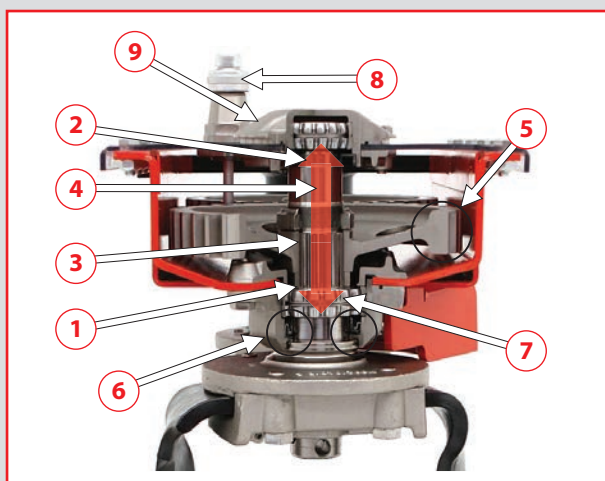
13 Gearbox cooling system Side gearboxes are fitted with an integral fan, allowing the gearboxes to be completely self contained with no need for separate oil coolers, fans and extra pipe work routed around the machine that could be damaged and cause the gearbox to fail.

14 Central ridge tine Ensures the soil is fully cultivated across the whole working width.

15 Transport trolley Optional transport trolley available.

ROTOR SPECIFICATIONS

- 1 **Pressed spline** The rotor splines are pressed not machined, resulting in much stronger teeth and a more robust rotor shaft capable of transmitting higher torque.
- 2 **Hardened rotor** The rotor shaft is made from 42 CrMo 4, hardened and tempered at 300 HB, which can increase its life by up to 62%.
- 3 **55mm rotor** The 55mm rotor shaft gives added strength to the driveline ensuring years of trouble-free operation.
- 4 **Stress distribution** The long shaft and reinforced SKF bearings are spaced as far apart as possible to cope with the twisting force and torque applied to the rotor.
- 5 **Hardened gears** Hardened tempered gears submerged in oil transfer the power from the driveline to the rotor tines.
- 6 **Seals** The Labyrinth cassette seal is made from cellular polyurethane and guarantees a perfect seal allowing the bottom bearing to be maintenance-free.
- 7 **Bearings** Each bearing has two rows of barrel bearings to cope with heavy workloads ensuring long life.
- 8 **Oil dipstick** The integrated dipstick with built in breather allows oil levels to be checked and controlled easily.
- 9 **Easy access bearings** Each rotor has a separate cover which allows the bearings to be checked or changed without the need to remove the whole transmission trough cover.



MODEL SPECIFICATIONS

| | JUMBO 250-550 hp | | |
|-----------------------------|------------------|--------------|--------------|
| Model | 6000 | 7000 | 8000 |
| HP | 250-550 | 250-550 | 300-550 |
| Working Width cm | 600 | 700 | 800 |
| Total Width cm | 612 | 712 | 812 |
| Transport Width (folded) cm | 253 | 253 | 253 |
| No. of Tines | 48 | 56 | 64 |
| Working Depth cm | 28 | 28 | 28 |
| Weight kg* | 4150 | 4450 | 5050 |
| Shaft Diameter mm | 55 | 55 | 55 |
| PTO/RPM | 1000/300-350 | 1000/300-350 | 1000/300-350 |

*Weight includes: 500mm Packer Roller

TINES

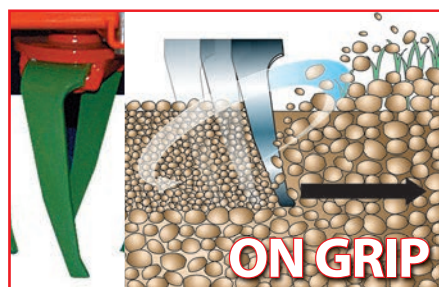
MASCHIO



All Maschio tines are produced in the Maschio factory and are made from high quality boron tempered steel to provide reliability during work and long lasting performance. They are made on a robotic production line to guarantee that from the first to the last they are all of the finest quality. One tine is produced every 6.6 seconds!

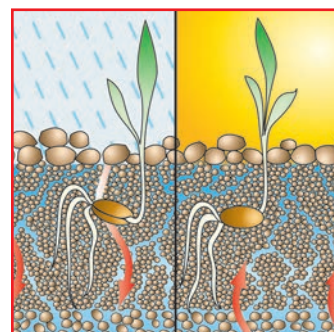
Maschio guarantee the quality of the tines for their life... **"So if you break one we replace it!" all completely free of charge.**

Point options include:



The special ON-GRIP tines were designed to address the need for a tine that could work on hard ground with a large amount of residue. The shape and angle of the blades ensure optimal mixing of soil and they also leave a large proportion of the large coarse soil and crop residues on the surface preventing the top layer of soil from creating a water tight crust.

The ON-GRIP tines can also be reversed to ON-SLIDE to work more like a standard power harrow blade and produce a finer tilth on the surface if required.



ROLLERS

THE POWER HARROW RANGE ROLLERS

The POWER HARROW RANGE rollers, adapt for different types of soil and different requirements for seed bed preparation, are available in 5 versions in the UK: Cage Roller, Packer Roller, Combi Packer, Rubber Roller and Guttler Roller. They feature:

- Sturdy, non-deformable structure. Reinforced removable roller support with protected lubricator.
- Levelling bar which contributes to the excellent breaking up of the clods. The bar configuration on the roller allows optimal ground levelling. Practical bar adjustment which needs only minor adjustment interventions, following the movement of the roller.
- Easy and fast roller adjustment using pins or hydraulics.
- Long-lasting tungsten soil scraper. Lowered soil scraper position for best cleaning. Adjustable soil scraper bar to near all soil scrapers to the roller at the same time.
- Bearings - stubshaft and bearing in one sealed unit.

COMBI PACKER

(Ø ext: 500 mm)



The Combi Packer roller is used primarily with combination drills. The large diameter of the tube gives excellent performance on heavy crop residues and soil profile hollows, thanks to the specially designed rings it ensures good seed to soil contact and constant seeding depth, complete with tungsten scrapers.

CRUMBLER ROLLER

(Ø ext: 370 mm & 450 mm)



Works well on medium soil types and in dry conditions creating a good seed bed.

PACKER ROLLER

(Ø ext: 450 mm, 500 mm & 600mm)



The toothed Packer Roller works well breaking up any surface clods further and at the same time leaving an excellent finish, ready for seeding. This roller also comes standard with tungsten coated scrapers.

RUBBER ROLLER

(Ø ext: 600 mm)



The Rubber Roller is suitable for use when using a power harrow combined with a seed drill in any soil type, it guarantees a constant drilling depth. It also comes as standard with tungsten coated scrapers.



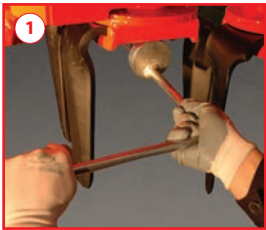
*Combi Packer

ROLLER APPLICATIONS

| Model | DELFINO DL | DELFINO SUPER | DRAGO DC | GABBIANO | DOMINATOR DM Rapido | AQUILA Rapido | ORSO Rapido | TORO Rapido | JUMBO Rapido |
|---------------|------------|---------------|----------|----------|---------------------|---------------|-------------|-------------|--------------|
| CAGE ROLLER | 370 | ● | | | | | | | |
| | 450 | | ● | ● | ● | ● | ● | | |
| COMBI PACKER | 500 | | | | ● | ● | ● | ● | ● |
| PACKER ROLLER | 450 | ● | | | | | | | |
| | 500 | | ● | ● | ● | ● | ● | ● | ● |
| | 600 | | | | ● | | ● | | |
| RUBBER ROLLER | 600 | | | | ● | | ● | | |

ACCESSORIES

MASCHIO



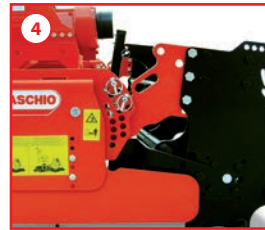
QUICKFIT
Rapido tines



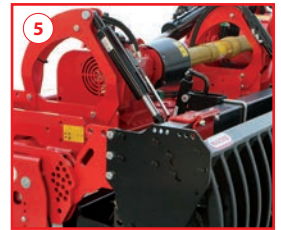
QUICKPLUS
Stone deflectors



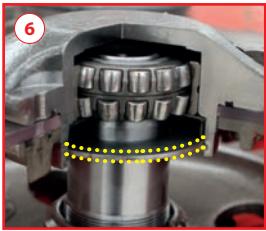
Double skin trough



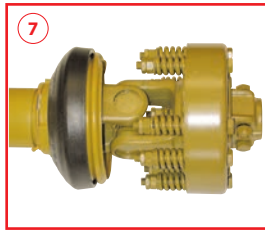
Rear roller with pin adjustment



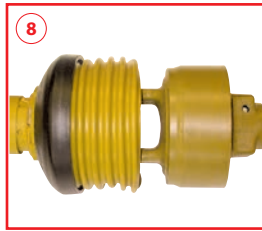
Hydraulic roller adjustment



Heavy duty barrel bearing



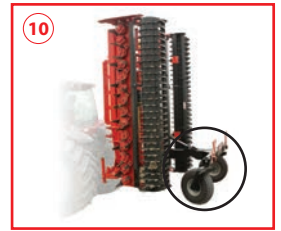
Slip clutch PTO shaft



Cam clutch PTO shaft



Hydraulic folding locks



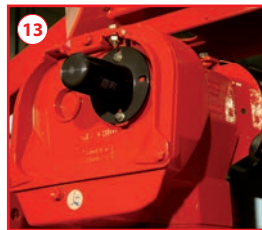
Transport trolley
(Aquila, Toro, Jumbo)



Tungsten soil scraper



Dampened side guards
with spring protection



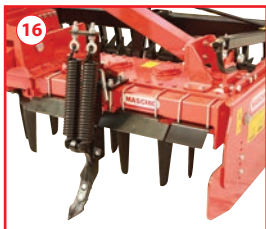
Rear output gearbox



Levelling bar mounted
on roller with mechanical
adjuster



Shearbolt wheel track
eradicators



Spring-type wheel track
eradicators



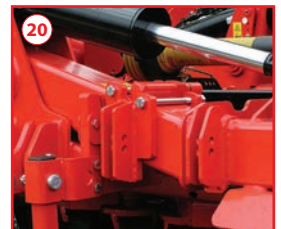
Hydraulic seed drill hitch



Swinging hitches



Front mount kit



Dual track eradicator
mounting brackets

STANDARD and OPTIONAL EQUIPMENT

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| DELFINO DL | | | | ● | | | ● | | | | ● | ● | | ○ | ○ | ○ | | | | |
| DELFINO SUPER | | | | ● | | | ● | | | | ● | ● | | ○ | ○ | ○ | | | | |
| DRAGO DC | | | ● | ● | | | ● | ○ | | | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | |
| GABBIANO | | | ● | ● | ○ | | | ● | ● | | ● | ● | ● | ● | ○ | ○ | | ● | | |
| DOMINATOR DM Rapido | ● | ● | ● | ● | ○ | | | ● | | | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | |
| AQUILA Rapido | ● | ● | ● | ● | ● | | | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ | ○ | ● | | ○ |
| ORSO Rapido | ● | ● | ● | ● | ○ | ● | | ● | | | ● | ● | ● | ● | ○ | ○ | ○ | ● | ○ | |
| TORO Rapido | ● | ● | ● | ● | ● | ● | | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ | ○ | ● | | ○ |
| JUMBO Rapido | ● | ● | ● | ● | ● | ● | | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ | | ● | | ● |

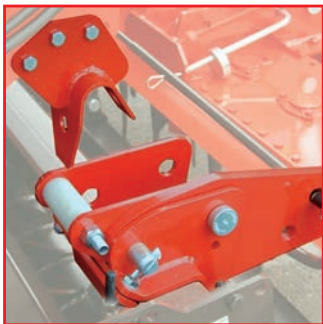
● Standard ○ Optional

QUICK MATCH TO A DRILL

The QUICK-MATCH system allows quick and easy attachment of a Maschio power harrow to a Maschio seed drill using a 3 point linkage, the drill and power harrow combination can be detached quickly and safely to use the harrow alone.

The QUICK-MATCH system uses plastic buffer rollers to fix the drill to the power harrow and transfer the weight of the drill to the power harrow roller only, preventing damage to the power harrow on rough and stony ground.

With the drill locked into position on the power harrows roller, the harrow and drill can float independently ensuring the drill seeds at a constant depth even on very uneven land.



OPICO offers an extensive range of Maschio combination drills that include gravity and pneumatic versions, from 3m rigid to 6m hydraulic folding. All are designed to be compatible with most of the power harrows in the range which enables users to configure a machine to meet their specific requirements.

As both the power harrows and drills are produced by the same company they are designed to work together as one which means less stress is placed on both machines during work.



distributed by 



Profit from our knowledge

YOUR LOCAL MASCHIO DEALER

OPICO Ltd,
Cherry Holt Road, Bourne,
Lincolnshire, PE10 9LA

T: 01778 421111

F: 01778 425080

E: ask@opico.co.uk

W: www.maschio.co.uk

