

Power Harrow Range



# Heavy-Duty Rigid and Foldable Power Harrows





# Kverneland – Range of Heavy-Duty Rigid and Foldable Power Harrows

Heavy-Duty Technology for Tough Conditions



To meet the ever increasing demand from modern farming Kverneland have a range of heavy-duty rigid and foldable power harrows with working widths of 2.5m to 6.0m.

The rigid range consists of three models:

- NG-M 101 for tractors up to 140HP
- NG-H 101 for tractors up to 180HP
- NG-S 101 for tractors up to 250HP

The foldable range consists of three models:

- NG-M 101 F20 for tractors up to 200HP
- NG-H 101 F30 for tractors up to 300HP
- NG-S 101 F35 for tractors up to 350HP

With farms increasing in size and being faced with new challenges, performance, reliability, versatility and good resale value will determine the standard for the farmers' choice.

#### Heavy-Duty Construction

The Kverneland Power Harrows are designed for heavy conditions and are built for tractors up to 350HP. Special emphasis has been given to reliability and a strong trough design. This has been achieved by having a large distance between the conical bearings, hardened gears in the trough and a heavy-duty rigid trough design.

#### New Quick-Fit Tines

All models can be fitted with Quick-Fit tines to meet customers demand for efficiency. The tines are secured by a special pin and clip mounted in the tine holder. The tines can therefore be replaced quickly without tools. 'Active' forward facing tines can easily replace standard tines, and when in combination with an Kverneland Accord mounted seed drill fitted with disc coulters; these 'active' tines will provide improved performance in heavy mulch conditions.

#### The Trough Design

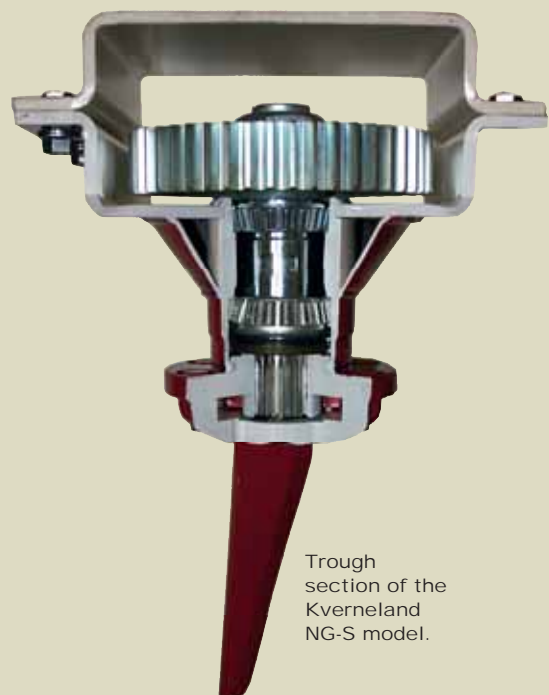
For optimum performance in difficult soil conditions, the robust trough design provides a large clearance between the tine holder and trough bottom. This allows large amounts of residue and stones to pass freely without blocking and provides excellent results in mulch conditions.

#### Easy to use – easy to maintain

Kverneland has focussed on ease of maintenance. The trough is filled with oil instead of grease to allow easier oil changes and positive rotor lubrication from initial start up. The tine carrier design of NG-H and NG-S is of two separate pieces, allowing the oil seal to be replaced without opening the trough. The rotors are sealed with cassette seals, ensuring no wear on the shaft and minimum maintenance.

#### A perfect combination

All Kverneland power harrows can be equipped with a wide choice of rear rollers and can be combined with Kverneland Accord seeder coulters together with the DF2 front hopper. As an option, a hydrolift system is available in order to combine the power harrow with a precision seeding unit.



Trough section of the Kverneland NG-S model.



# 10 Good Reasons for Choosing a Kverneland Power Harrow



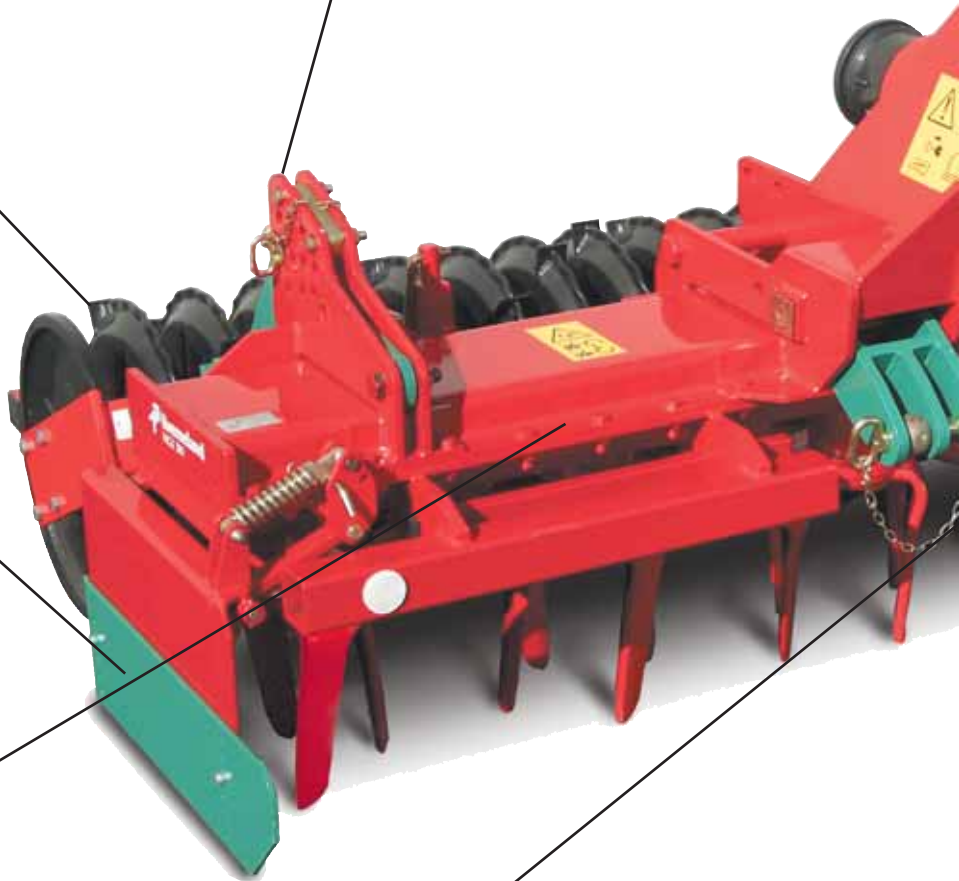
Possibility to fit a choice of: cage roller, tooth packer, cracker packer or flexline roller.



The depth adjustment bracket is positioned closer to the headstock to reduce stress on the whole construction and to allow the ease of fitment of all Kverneland packer roller types.



Floating side deflectors with overload protection allow smooth operation and a ridge free soil surface.



Robust, self-supporting trough design provide the necessary strength for trouble free operation.



Quick-Fit tines – the tines are locked in position by a pin and clip. Tines are quickly replaced without tools.



**Robust and reliable headstock for easy connection to all tractors and the attachment of heavy seed drill combinations.**



**Spring loaded, infinite adjustment of the rear leveling bar ensures a level surface.**



**Fully welded rotor housings (NG-S models) ensure high bending and torque resistance to the trough when working in very tough soil conditions. This also provides an optimum clearance between the trough bottom and tine holders and allows large amounts of residues and stones to pass freely without blocking.**



**Robust change gear box with replaceable gears as standard. Additional sets of gears are available.**



**Two large conical bearings with a wide distance provide rigidity and a long service life.**

# Kverneland Power Harrow Programme – Feature by Feature



Technology based on 4 rotors per meter  
Kverneland has more than forty years experience on power harrow construction; our rotor technology guarantees excellent soil preparation with minimum power consumption.



Parallel hydraulic depth adjustment  
The working depth is adjusted by clips and a hydraulic ram from the tractor seat. A parallelogram linkage ensures that the power harrow is always in a horizontal position to the roller. Therefore, the packer roller scraper bar position is always at a fixed height to the ground, independent from the working depth.



Effective rear levelling bar  
Kverneland's high performance rear levelling bar is infinitely height adjustable. The turnbuckle adjustment is easy to use, even with a seed drill mounted.  
A scale ensures an even height is achieved across the full working width. An in-built spring system maintains the bar in an effective and consistent operating position.



Side deflector with parallelogram  
With its unique parallel guided linkage, the side deflector can move up and down, following ground contours. If stones are trapped between deflector and outer rotor, the deflector can open via coil spring overload protection.  
For strict transport regulations, the deflectors can easily be set in a raised transport position, just by removing one pin.





**Kverneland Accord quick-hitch**  
All models can be fitted with a Kverneland Accord seed drill quick-hitch for fast and easy attachment and demounting.



**Mechanical hitch**  
A mechanical 3 point seed drill hitch is available for conventional seed drills.



**Hydrolift**  
Ensuring the closest possible positioning of the drill behind the tractor during transport, the robust Kverneland hydrolift is fitted with twin hydraulic cylinders for easy and even lifting of heavy seed-filled drill hoppers. A mechanical locking device ensures safe road transport.



**Hydraulic functions management.**  
The foldable machines (F30 – F35) can optionally be equipped with a control panel that allows the management of 5 different functions from the tractor cabin by using just one double acting spool.



**Track marker arms with overload protection**  
The track marker arms are fitted directly to the trough of the power harrow. Overload protection is ensured by means of shear bolts.



**Track eradicators**  
Various types of track eradicators are available to suit all situations.



## Heavy-Duty trough design and transmission ensure a long working life

As the Kverneland Power Harrows are designed for tractors up to 350HP (NG-S 101) the construction of the trough and transmission is very robust.

The trough, which is the backbone of the whole machine, is made of two folded profiled plates, forming a beam which is extremely rigid against bending and torsional stress.

There is a difference in dimensions between the three models, but they are all made following the same principles, see figures below.

### Reliability

Special emphasis has been given to reliability. This has been achieved by having a large distance between the conical bearings, hardened gears, and

precise distance between the gears and the heavy-duty rigid trough design.

### Heavy-Duty conical bearings

The robust shaft and two heavy-duty conical bearings with large distance ensure trouble free operation;

For the NG-M 101 model:  
Ø 40/45mm with a distance of 47mm.

For the NG-H 101 model:  
Ø 45/50mm with a distance of 55mm.

For the NG-S 101 model:  
Ø 55/60mm with a distance of 80mm.

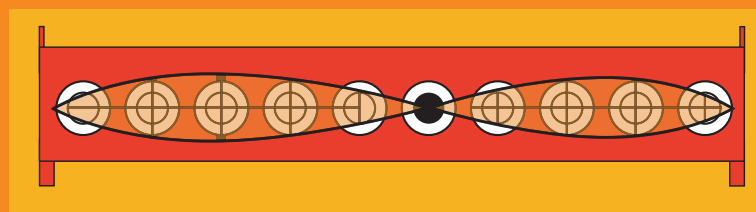
In addition, the massive clearance between the trough bottom and the tine holder gives perfect passing of residues and stones.



## Carbide tines

Down time can be minimised by optional carbide layered Quick-Fit tines. These tines ensure a long lifetime and minimum wearing even in tough and abrasive soils. The Quick-Fit system ensures an easy change of tines without the need for tools.

Dimensions:	NG-M 101	NG-H 101	NG-S 101
Plate thickness:	5mm	6mm	10mm
Reinforcement plate:	10mm	12mm	–
Through mm:	120 x 400	140 x 400	150 x 400



### Helical tine positioning

The tines are arranged in varying angle positions in order to prevent damage caused by stones and ensure even levelling. This reduces also peak loads on the driveline and results in smoother running and less fuel consumption.





Kverneland Foldable Power Harrows – Wide in operation – narrow in transport  
Quick in the field and quick on the road – they can easily be brought into transport position (2.50 – 2.90m with DF2 coulterbar) from the tractor cabin.





# Kverneland Foldable Power Harrows

## For Large Scale Performance

The Kverneland range of foldable power harrows (4.0 – 6.0m) offers maximum performance with narrow transport abilities. A heavy-duty headstock and a robust transmission system ensure years of effective and trouble free operation. The advanced parallelogram hydraulic depth control system guarantees a perfect seedbed.



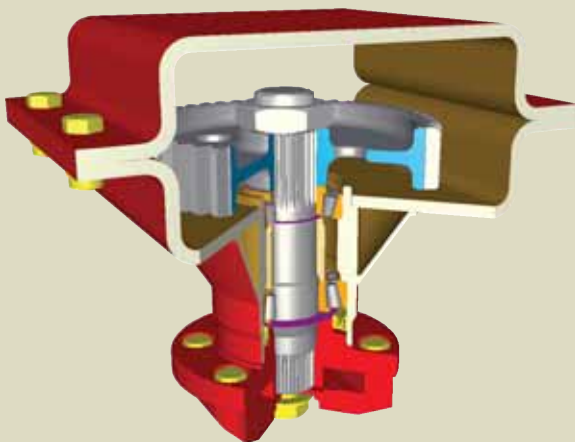
All Kverneland foldable power harrows are equipped with a change gearbox. With an overload protection rated from 1800Nm to 2500Nm they ensure a robust driveline up to 350HP tractors. The rotor speed setting is varying from 246 to 450rpm at 1000rpm between the F20, F30 and F35.



# Kverneland NG-S 101 F35

For Tractors up to 350HP

The Kverneland foldable power harrow NG-S 101 F35 is the result of effective cooperation between cultivation and seeding experts to construct a "state of the art" strong and effective implement designed for tractors up to 350HP and optimum performance. The F35 power harrow is available in working widths of 4.0 to 6.0m.



## Heavy-Duty trough construction

The upper half of the trough is made from 10mm steel plate. In order to give the NG-S 101 F35 the strongest design and to enable it to withstand the toughest of conditions, the trough base is also made from 10mm steel plate. The welded conical bearing housings give highest strength to the overall trough. The heavy-duty tine carrier shafts are 60mm diameter with the conical bearings dimensioned large enough to cope with tough and stony conditions.



# Kverneland NG-H 101 F30

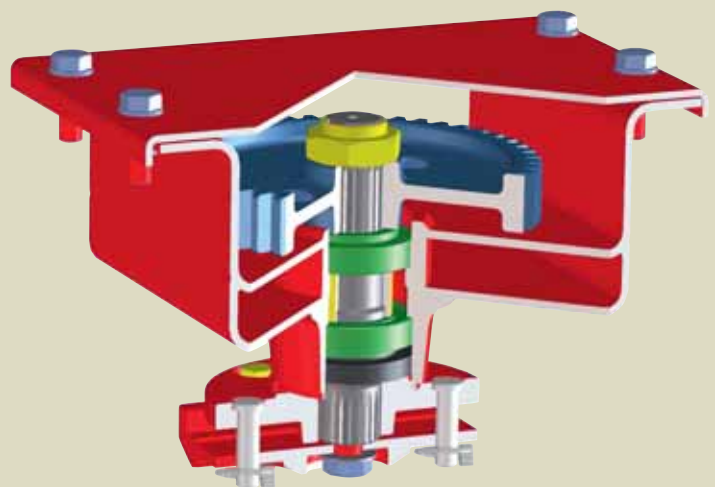
## For Tractors up to 300HP

The Kverneland foldable power harrow NG-H 101 F30 has a new trough design that does not require any lateral frame. This saves weight and gives a tidy look to the machine. For optimum performance the new trough design provides a high clearance of 95mm between the tine holder and trough bottom. The F30 power harrow is available in working widths from 4.0 to 6.0m.



### Innovative and robust trough concept

By a simple and clear design the new F30 trough offers excellent performance with a limited weight. Double conical bearings and rotor shaft of 50mm diameter in combination with removable tine holders and Quick-Fit tines guarantees high reliability and very low maintenance requirements.





# Kverneland NG-M 101 F20

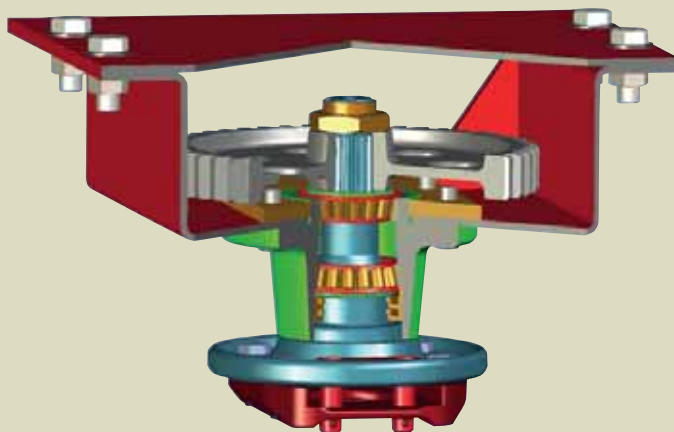
## For Tractors up to 200HP

The Kverneland foldable power harrow NG-M 101 F20 is the ideal implement for mid class tractors up to 200HP. During the development process special emphasis has been given to reliability, performance and a strong trough design. Nonetheless the NG-M 101 F20 stands out for its light weight and is available in working widths of 4.0 and 5.0m.



### Simple and reliable trough design

The proven trough design is taken from the rigid NG-M 101. The 120 x 400mm trough is made from a 5mm profiled steel plate. The 10mm bottom plate is precisely positioning the rotors. In combination with vertical ribs at each rotor, this gives a light but strong and bending resistant trough. The NG-M 101 F20 is equipped with bolt on tines, Quick-Fit Tines are available as an option.



# Kverneland – Rigid Power Harrows

## Heavy-Duty Technology for Tough Conditions



### Kverneland NG-M 101 – for tractors up to 140HP

#### **Trough construction**

A 5mm profiled plate together with a 5mm top plate form the 120 x 400mm trough. In combination with a 10mm reinforcement plate, precise positioning of the rotors gives a light but strong bending resistant trough.

#### **Tine dimension**

12 x 280mm.



### Kverneland NG-H 101 – for tractors up to 180HP

#### **Trough construction**

Two profiled 6mm plates, plus a 12mm reinforcement plate ensuring precise rotor spacing, high bending resistance in the 140 x 400mm trough

#### **Tine dimension**

15 x 310mm.



### Kverneland NG-S 101 – for tractors up to 250HP

#### **Trough construction**

Two 10mm profiled plates forming the 150 x 400mm trough. The fully welded rotor housings add additional strength and bending resistance to the trough.

#### **Tine dimension**

18 x 330mm.



# Kverneland NG-S 101

## For Tractors up to 250HP

A heavy-duty power harrow for all kinds of operations in all types of soil conditions. Robustly designed for use on tractors up to 250HP, with the Kverneland heavy-duty trough design and Quick-Fit tines this power harrow is the right alternative for large farms and farm contractors.

### The NG-S trough – designed for reliability and optimum performance

#### Trough

Two 10mm profiled plates forming the 150 x 400mm trough. The fully welded rotor housings add extra strength and bending resistance to the trough.

#### Tine shaft of 60mm

With two large conical bearings,

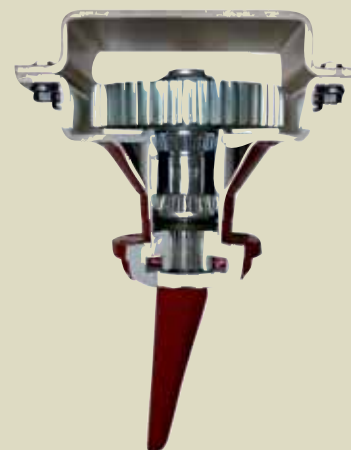
Ø 55 and Ø 60mm with a distance of 80mm and heat-treated 50mm gears.

#### Ample clearance

125mm clearance between the trough bottom and the tine holder ensure good soil flow and allow residues to pass easily through the machine.

#### Tine dimension

18 x 330mm.



# Kverneland NG-H 101

## For Tractors up to 180HP

A robust medium sized power harrow for effective operation in most conditions. Designed for use on tractors up to 180HP, with the Kverneland heavy-duty trough design and Quick-Fit tines this power harrow is the ideal choice for medium sized farms.



### The NG-H trough

– designed for durability and reliability

#### Trough

Two profiled 6mm plates, plus a 12mm reinforcement plate, ensuring precise rotor spacing, high bending resistance of the 140 x 400mm trough.

#### Tine shaft of 50mm

With two large conical bearings,  
Ø 45 and Ø 50mm with a distance of 55mm and 40mm gears.

#### Ample clearance

95mm clearance between the trough bottom and the tine holder ensure good soil flow and allow surface residues to pass easily through the machine.

#### Tine dimension

15 x 310mm.





# Kverneland NG-M 101

## For Tractors up to 140HP

The Kverneland NG-M 101 is a medium sized power harrow for tractors up to 140HP, built following the same design concept as the well known "H 101" and "S 101" models. The self-supporting trough construction, as well as optional 'Quick-Fit' tine holders and conical bearings offer optimum performance.

The NG-M trough – high technology brought to the basic model

#### Trough

One 5mm profiled plate and a 5mm top plate form the 120 x 400mm trough. In combination with a 10mm reinforcement plate, precise positioning of the rotors, and vertically strengthening ribs, it forms a light but strong bending resistant trough.

#### Tine shaft of 45mm

Two large conical bearings, Ø 40 and Ø 45mm with a distance of 47mm and robust 30mm gears.

#### Ample clearance

90mm clearance between the trough bottom and the tine holder.

#### Tine dimension

12 x 280mm.



# Kverneland Packer Rollers

Soil conditions as well as crop establishment systems are different from one location to another. The choice of suitable equipment is vital with regards to preparing an optimal seedbed as a good start for perfect growth and high yields.

When it comes to power harrows it is the rear roller which makes the difference. Though being a part of the machine, some roller types might even be mentioned as a soil working tool themselves.

Finally, it should be the farmer, knowing best about his demands.

The Kverneland range of rollers makes sure that this demand will be met, in the best possible way.

The choice includes all roller variants being available in combination with a power harrow from:

- Cage Roller Ø 550mm
- Tooth Packer Roller Ø 500 + 585mm
- Flexline Roller Ø 585mm
- Cracker Roller Ø 550m
- Actipack Roller Ø 560mm





# Features and Benefits



Tooth Packer Roller Ø 500 + 585mm

- Optimum performance on medium to heavy soils
- Good carrying capacity
- Good self cleaning effect
- Central adjustable scraper bar with independently adjusted scrapers
- Carbide-coated scrapers on request
- Most versatile roller – especially as part of heavy power harrow/seed drill combinations



Flexline Roller Ø 585mm

- For light to medium-heavy soils – especially under varying soil conditions
- Large diameter gives perfect carrying capacity
- Stripe-wise reconsolidation (12.5cm) in front of seed coulters but roller resting on soil surface completely
- Scraper bar with independently adjustable scrapers
- Smooth roller surface – no blocking when used in mulch conditions



Cracker Roller Ø 550mm

- Real stripe-wise reconsolidation (12.5cm) in front of seed coulters – only 50% of the soil surface is rolled
- Good absorption of water
- Sufficient soil left loose for covering of seeds
- Optimum performance on medium to the heaviest of soils
- Good crumbling effect on heavy soils
- Smooth rings and passive-angled knives – no blocking when used in mulch conditions



Cage Roller Ø 550mm

- Basic variant; mainly for depth control of the power harrow
- Suitable for light to medium soils and dry working conditions e.g. seed bed preparation for potato-planting
- Included in the front-mounting kit for additional depth control in front of the machine



Actipack Roller Ø 560mm

- Superb working quality especially on medium to heavy soils
- Scraper between the discs
- Optional knives for intensive crumbling effect
- Pressure on knives is adjustable and provides equal firming on the entire working width
- Out of work position possible to leave rough surface and protect the top layer

# A Perfect Combination – Kverneland Power Harrows and Accord Seed Drills



**Kverneland NG-S F35 and Kverneland Accord DF-2 coulter bar with front hopper**



**Kverneland NG-S 101/Kverneland Accord i-drill PRO**



**Kverneland NG-H 101/Kverneland Accord s-drill PRO**



## The big difference Kverneland "Pro-Fit" Active Tines

The "Pro-Fit" Active tines ensure optimum penetration in hard soil. The tine, due to its shape, pulls itself into the ground. This gives a constant working depth and also prevents the machine from lifting out of the ground in hard dry soil conditions. In addition it creates additional recompaction at the packer roller.

The "Pro-Fit" Active tine lifts the material and pushes it in front of the power harrow. This gives an optimum levelling effect even in tractor tracks. In mulch conditions the active tines can work directly into stubble and hard soil. The special shape of the tines keeps residues on the surface and this gives a big advantage against erosion.



Kverneland NG-M 101/Kverneland Accord DA

# Technical Specifications

## Rigid Power Harrows

Specifications	NG-M 101		NG-H 101			NG-S 101			
Working width (m)	2.50	3.00	3.00	3.50	4.00	3.00	3,50	4.00	4.50
Transport width (m)	2.50	3.00	3.00	3.50	4.00	3.00	3,50	4.00	4.50
Weight with packer 500mm (kg) *	1270	1410	1730	1945	2187	1940	2164	2417	2670
Min – Max power requirement (HP)	70 – 140		85 – 180			100 – 250			
PTO input speed (rpm)	540 (1)		1000			1000			
Overload protection (Nm)	disc clutch 1600 (3)		automatic clutch 1800 – 2300			automatic clutch 2000 – 2500			
Number of rotors	10	12	12	14	16	12	14	16	18
Number of tines	20	24	24	28	32	24	28	32	36
Rotor speed (rpm)	311 std.(2) or 327(1)		336 std. (290, 362, 450 optional)			298 std. (238, 365, 435 optional)			
Rotor clearance (mm)	80		95			125			
Tine dimension (mm)	12 x 280		15 x 310			18 x 330			
Oscillating lower link	Cat. II	Cat. II	Cat. II	Cat. II	Cat. II & III	Cat. II & III			
Ready to carry or integrate seeding eq.	yes		yes			yes			

1 1000 rpm input as option

2 alternative rotor speed available as option

3 automatic clutch available as option

\* all weights with standard tines, packer 500mm, levelling bar - no PTO shaft weight included





## Foldable Power Harrows

Specifications	NG-M 101 F20		NG-H 101 F30				NG-S 101 F35			
Working width (m)	4.00	5.00	4.00	4.50	5.00	6.00	4.00	4.50	5.00	6.00
Transport width (m)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Weight with packer 500mm (kg) *	2370	2970	2550	2950	3250	3650	2800	3200	3500	3900
Min – Max power requirement (HP)	110 – 200		130 – 300				140 – 350 (1)			
Pto input speed (rpm)	1000		1000				1000			
Overload protection (Nm)	disc clutch 1800		automatic clutch 2200				automatic clutch 2500			
Number of rotors	16	20	16	18	20	24	16	18	20	24
Number of tines	32	40	32	36	40	48	32	36	40	48
Rotor speed (rpm)	327 std. (282, 351 optional)		336 std. (290, 362, 450 optional)				246, 326, 387 and neutral position			
Rotor clearance (mm)	80		95				125			
Tine dimension (mm)	12 x 280		15 x 310				18 x 330			
Oscillating lower link	Cat. III		Cat. III				Cat. III			
Ready to carry or integrate seeding eq.	not possible		yes – brackets as option				yes – brackets as option			

### 1 As option available with 400HP gearbox

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## Kverneland Group

Kverneland Group is a leading international company developing, producing and distributing agricultural machinery and services.

Strong focus on innovation allows us to provide a unique and broad product range with high quality. Kverneland Group offers an extensive package aimed at the professional farming community, covering the areas of soil preparation, seeding, forage and bale equipment, spreading, spraying and electronic solutions for agricultural tractors and machinery.

## Original Spare Parts

Kverneland Group spare parts are designed to give reliable, safe and optimal machinery performance – whilst ensuring a low cost life-cycle. High quality standards are achieved by using innovative production methods and patented processes in all our production sites.

Kverneland Group has a very professional network of partners to support you with service, technical knowledge and genuine parts. To assist our partners, we provide high quality spare parts and an efficient spare parts distribution worldwide.



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