**Kverneland Mounted and Semi-mounted Ploughs** 

The Part and Party in Street



RZ 9329

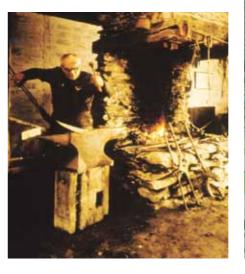
# For easy and efficient ploughing

# **130 years' Experience**

Kverneland's unique heat treatment process means unsurpassed quality and wear resistance keeping operating costs down to a minimum.

# Kverneland is the world's leading plough manufacturer

More than 130 years' experience with steel working the soil.



Ever since Ole Gabriel Kverneland opened his village smithy in 1879, research, development and production have been geared to the making of ploughs. From one of many small Norwegian village smithies, Kverneland has developed into the world's biggest plough manufacturer. This demonstrates the company's determination and ability to think innovatively and to have the conviction to believe in and go for its own particular vision. It also demonstrates an ability to achieve goals, as well as creativity and quality engineering design at a very high level.

Our No. 1 position has been obtained by deliberately acquiring and building up competence in the company. From the very beginning, Kverneland has given high priority to developing close contacts with end users. Systematic follow-up and documentation of the experiences of individual customers have allowed us to adapt our projects to the changing needs and requirements of those farmers.

Kverneland's overall objective is to maintain and support its position as the world's leading producer of soil preparation equipment.



However, there is more to being the market leader than just having a big market share. As a leading manufacturer, Kverneland also takes responsibility for developing new, improved soil preparation systems. Systems, when combined with the right equipment, give the individual farmer the opportunity to carry out his work more efficiently and more cost efficient.

In plotting the company's success, there are many examples of technical innovations and milestones to choose from in Kverneland's history. For years and years, the company has spearheaded the development of ideas that have become the standards for the industry. Examples of such progress are plough bodies with reversible points, reversible ploughs with a fully automatic auto-reset system, the Vari-Width® system (infinitely variable adjustment of furrow width), the Vibromat system (ploughs with an in-built shock absorber system), and more recently, the reversible ploughs with an integrated soil packer, the Packomat.

For Kverneland, development is simply a way of life.

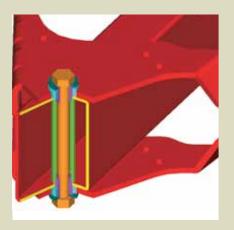
Kverneland hold a dominant market share in Europe and export to more than forty countries worldwide.

## Contents Page

The Vari-Width® System	4
The Auto-Reset System	6
Plough Bodies	7
Mounted ploughs AB/AD	8
Semimounted plough BE	10-12
Equipment	13
Original wearing parts	14
Kverneland high performance	15
Specifications	15

# Kverneland Vari-Width® System **Optimal working width**





The heat-treated mainframe together with the bolt, distance tube, two cones and hardened bushes ensure a unique non-wearing pivot joint between the beams and the mainframe.



Kverneland Vari-Width® is a patented system for mechanical or hydraulic adjustment of the furrow width.

The system provides the optimal match between tractor, implement and soil conditions. Using the Vari-Width<sup>®</sup> system, you can plough wider, quicker, better and at lower cost.

## 50 cm / 20"

#### Improve your output

The Vari-Width<sup>®</sup> concept is based on gaining maximum output. As the ploughing width can be constantly varied, on the move and at will (hydraulic version), the full power and traction of the tractor can be utilised at all times, taking varying soil conditions and difficult terrain in its stride.

Kverneland's Vari-Width® system has been the market leader for many years. The experiences of satisfied users and the tests carried out by several international research institutes have demonstrated that the system is without question one which has permanently changed the thinking on ploughing techniques.

#### 30% increase in capacity

Kverneland Vari-Width® offers cost saving and output related advantages in addition to the practical fact that the work can be done more easily. In terms of capacity, it is of great benefit to be able to vary the ploughing width. By increasing the furrow width from 35 cm to 45 cm (14" to 18"), the overall ploughing width is increased by an impressive 30%. In terms of fuel used, the consumption of diesel in relation to the increased output is reduced by as much as 18%.

## 30 cm / 12'

AT \$\$25

#### Easy to work width

With Vari-Width<sup>®</sup> it is easier to make a better job. The work can be kept straighter more easily, and it is easier to work up to hedges, fences, trees, ditches, etc.

Most importantly, however, Vari-Width® saves time, and is available in two versions either hydraulic or mechanical adjustment of the furrow width. The hydraulic variant allows adjustment of the furrow width from the driver's seat "on the move".

The practicality of being able to determine not only the depth, but also the width of the furrows is crucial if the best results are to be achieved.



# **Kverneland Auto-reset System Efficient and easy to use**

# **Kverneland Plough Bodies Excellent Ploughing Quality**





#### Unbeatable in stony conditions

Kverneland's fully automatic non-stop auto-reset system has always been unbeatable when it comes to trouble-free ploughing in stony conditions.

### The most efficient system on the market

The simple multi-leaf spring system allows the plough legs to release over stones and other solid objects in the ground in a

smooth and efficient manner. This avoids sudden jolts and possible damage. Once the obstruction has been passed, the plough body automatically returns to the correct ploughing depth.

#### Minimum maintenance

With today's demands for higher output, both tractor and plough are expected to perform quicker than ever before. This makes more arduous demands on the equipment, particularly on the safety systems designed to protect the tractor, plough and driver against the dangers encountered whenever the plough meets hidden obstructions in the ground. Kverneland's auto-reset system has a very simple construction and yet is able to withstand these punishing forces year in, year out, with a minimum of maintenance.

#### With Kverneland's Auto-reset system, you just keep on going Whenever the plough meets an

obstruction, it releases over it and then returns to the correct ploughing depth. Easy and efficient.







**Over the years Kverneland** has developed a complete range of bodies to suit all types of conditions. They are renowned all over the world for their excellent ploughing quality, outstanding wear resistance and low draft requirements.

Kverneland plough bodies are made of a special steel which is then heat treated thanks to a unique technology developed by Kverneland. It results in an unsurpassed quality and wear resistance combined with the necessary flexibility to absorb impacts.



12 hours carburising heat treatment for each mouldboard



Body 28 especially suited to tractors with wide tyres.

#### Body No. 8

# Body No. 9

Body No. 28

## Body No. 14

No.19 body.

#### Body No. 19

more effective

## Body No. 30

A general purpose body which is suited to both heavy and light soils. Capable of working at varying depths 15cm to 30cm (6 to 12 inches) and widths 30cm to 50cm (12 to 20 inches) with good cleaning and soil inversion characteristics. This body is the most popular in the range and was specially designed to work with Vari-Width ploughs.

Like the No. 8, but even more highly "tuned' Designed for wider and deeper ploughing at depths of 15 to 35 cm (6 to 14 inches). Suitable for heavier land where well turned and packed furrows are required.

Introduced in 2003 the No.28 body is suitable for all soil types. Longer than body No.8 it creates a flatter profile for improved tilth Also its shape and action moves the soil further away from the landside increasing the furrow bottom width by as much as 25%. This allows wide tractor tyres to work in the furrow without rolling down the previous furrow. Suitable for depths of 15 to 30cm (6 to 12 inches) and widths from 35 to 50cm (14 to 20 inches).

A plough body with a plastic mouldboard, for use in organic soils where sticking can be an acute problem. Actual performance is similar to the

- Specially designed for heavy land, the No.19 is also very good for burying large quantities of chopped or stripped straw. The angle of the mouldboard effectively increases the clearance between the bodies and gives a totally inverted furrow which seals in the trash. The finished work is
- more broken, making secondary cultivation operations

Special bodies designed with a finger mould board giving improved cleaning when working in very sticky soils. Capable of working between 20cm and 35 cm deep (8 to 14 inches).

# Kverneland AB/AD Vari-Width<sup>®</sup> Ploughs Strong and efficient

#### Conventional mounted ploughs with stepless furrow width adjustment, manual or hydraulic.

Increase your capacity up to 30% with 20% less fuel.

#### **Robust construction**

The Kverneland AB & AD are known for their simple but strong and reliable construction. They are an answer to the modern farmer who demands easier adjustment, greater efficiency and better profit.

A robust 100x200 mm square frame, which is induction heat-treated by a special method developed by Kverneland, gives the necessary strength. This together with the heavy duty beams, the Kverneland auto-reset system and the well known Kverneland bodies gives an effective plough for ploughing in most conditions.

#### Kverneland Vari-Width®

Both models have the efficient Vari-Width<sup>®</sup> system, which allows infinite furrow width adjustment from 30 to 50 cm (12" to 20").

The main difference between the two models is that model AB has a mechanical furrow width adjustment, while model AD has a fully hydraulic furrow width adjustment system. On the AB model the furrow width adjustment is done by using two turnbuckles - one to angle the main frame and the other to correct the width of the front furrow. On the AD model, a special frame construction with one hydraulic cylinder enables the operator to hydraulically adjust all furrows, including the first one, plus the realignment of the rear wheel, with a single lever operation from the tractor seat.

On the AB model all adjustments have to be done manually while setting up the plough. The AD system however provides "On the Move" adjustment - hydraulically from the tractor seat.

### Up to 30% increase

The Vari-Width® system gives new possibility in ploughing. The concept behind these ploughs is that they give the possibilities of optimal furrow width for all types of soil, moisture conditions and tractor capacity. By increasing from 35 to 45 cm (14" to 18") the working capacity will be increased by up to 30%.

#### **Kverneland Auto-Reset system**

The Kverneland auto-reset system, the simplest and most reliable system in the world, ensure trouble-free work in stony fields for years.

#### Very easy to operate

Furthermore both models are easy to adjust to all types of tractors and are very easy to operate, only a few adjustments, and the plough is ready for work.

Under difficult conditions one or more bodies can be locked in a parked position. All models except the largest are extendable by one furrow. This means that the plough can grow with the size of your tractor.

Kverneland AB is available as: 2-, 3- and 4 furrows, while Kverneland AD is available as: 3-, 4- and 5 furrows.

Mechanical front furrow width adjustment is standard. However, a hydraulic cylinder is available and is recommended for ploughing on side slopes to control the front furrow width "on the move".



# **Kverneland BE Robust semi-mounted ploughs**



#### Strong design

The Kverneland BE model has a upgraded design to better withstand the ever increasing demand from the market. The dimensions of the main beam is 200 x 200 mm using a special induction heat-treated tube. In addition the whole front and hitch system is also upgraded and strengthened.

The model is available in sizes from 5 to 8 furrows and both have the unique Kverneland Auto-Reset system allowing perfect Non-Stop ploughing in most conditions.

The Kverneland BE model has a hydraulically operated rear wheel and both models are available in "In-Furrow" or "On-Land" versions.

#### Kverneland BE Vari-Width®

The system allows the user to select and change working widths "On the Move" between 35 and 55 cm (14 and 22 inches). The Vari-Width® system ensures perfect ploughing in any conditions by giving possibilities for adjusting the ploughing width according to the ploughing conditions. On

heavy soils, it may be advantageous to use a narrow ploughing width of 35 cm (14"), while ploughing in light and sandy conditions, allows you to go up to the maximum width of 55 cm (22").

The adjustment of the ploughing width is done hydraulically from the tractor seat. This makes selection of the desired working width effortless and uncomplicated.



#### Very easy to operate

The Kverneland BE is very easy to adapt to different tractor wheel settings, so once the plough is initially adjusted for a specific tractor wheel width, the Vari-Width® system ensures that the lines of draft remain correct even when widening the furrows to the maximum size, thus eliminating any need to readjust the tractor wheel settings.

With an underbeam clearance of 80 cm (32") and a interbody clearance of 100 (40"), the Kverneland BE plough will operate in all ploughing conditions with perfect results.

The Kverneland BE model is available with: 5-, 6-, 7- and 8 furrows.

Mechanical front furrow width adjustment is standard. A hydraulic cylinder is available as an option and is recommended for ploughing in hilly conditions to adjust the furrow width "on the move".

Easy front furrow adjustment The Kverneland BE plough has got a heavy front and hitch attatchment making it easier to fit to all tractors and making it easier to adjust the witdth of the front furrow.

Manual front furrow adjustment is standard equipment, but a hydraulic cylinder is available as option for hydraulically operations from the tractor seat. Can also be adjusted under work and is very advantageous when working across sloping grounds.

### **Kverneland beams**

The standard beam on the Kverneland BE and other models are extremely strong. The steel quality together with the special heat treatment provides maximum strength. The beams have been used for many years on thousands of ploughs and are working in all conditions all over the world.



## The Kverneland Vari-Width<sup>®</sup> offers **Advanced Ploughing Performance:**

- The smoothest and most reliable auto reset system on the market for "nonstop" performance.
- Extra heavy duty beams that are easy to true up, ensuring all the bottoms are aligned and working at the same depth for the best job.
- Permits the ideal relationship between ploughing depth, width, and the soil for superb performance.
- Enables optimum utilization of tractor horsepower.
- Makes it easier to plough close to fences or borders, straighten crooked furrows, and to take the finishing furrow.
- · Reduced fuel costs, because of lighter draft.
- Narrow transport position for ease and safety on the road.



Hydraulic operated rear wheel The Kverneland BE plough is equipped with a new hydraulically operated rear wheel, making it very easy to operate the plough. The new system provides small turning radius and excellent manouvrability during work and transportation.

The BE plough can be supplied with different wheel dimensions





Disc Coulters - Disc coulters are available in sizes of 45 and 50 cm (18 or 20 in.) diameter, plain or notched. They are mounted on single arms and are easy to adjust to suit all conditions.



#### Trashboards Particularly useful when large quantities of surface trash, manure, straw, etc. are present. The use of trashboards increases the clearance between the bodies when compared with the use of skimmers.



Sword Share Knives These are an alternative to disc coulters. where reduction in weight may be necessary or where blockage from trash or stones is likely. Can only be used on ploughs fitted with reversible points.





Landside Knives A very good alternative to disc coulters, where reduction in weight may be necessary or where blockage from trash or stones is likely. Good in combination with skimmers.





Skimmers

The use of skimmer is recommended for effective burial of stubble, straw, grass and weeds etc. Two types of skimmers are available - manure skimmers and maize skimmers. Both can be equipped with either a long share for more effective trash burial or a short share for sticky soils. The skimmers are mounted to the plough by means of a strong bracket. Central fixing and adjustment prevents the skimmers from twisting during ploughing.

Shares with Reversible Points The most cost effective 'share' system for ploughing hard and abrasive soil and under generally difficult conditions.

Shares with Flush Fit Points **Recommended for ploughing in sticky soil** conditions. The point is fixed by means of a single bolt and is therefore quickly replaced.

Information provided in this brochure is made for general information purposes only and for worldwide circulation. Inaccuracies, errors or omissions may occur and the information may thus not constitute basis for any legal claim against Kverneland Group. Availability of models, specifications and optional equipment may differ from country to country. Please consult your local dealer. Kverneland Group reserves the right at any time to make changes to the design or specifications shown or described, to add or remove features, without any notice or obligations. Safety devices may have been removed from the machines for illustration purposes only, in order to better present functions of the machines. To avoid risk of injury, safety devices must never be removed. If removal of safety devices is necessary, e.g. for maintenance purposes, please contact proper assistance or supervision of a technical assistant. © Kverneland



Rear Depth Wheel for AB/AD ploughs. When ploughing in changing soil conditions and when it is essential for an even depth,





# **A complete** range of accessories

In order for the plough to operate to its optimum, it needs to be equipped with the correct accessories to suit the particular soil type and field conditions.

**Kverneland offer a complete** range of accessories for all the different plough models.



**Furrow Opener** For use on the rear body to increase the width of the furrow bottom in order to accept tractors with larger tyres - up to 30" wide, for example, especially when used in conjunction with the No.19 body.

# **Kverneland Original wearing parts** Make life much easier

# World Ploughing Championship **Kverneland high performance**

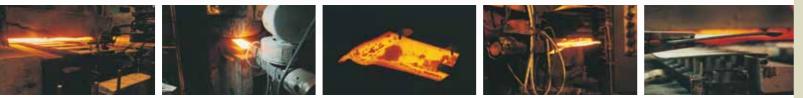
It is difficult to see the differences at first glance, but the advantages will soon become clear.

More steel may look initially appealing, but the result is invariably very disappointing. The shares wear more quickly and the plough becomes unbalanced, as many of the forces and loads act against the natural line of draft. hampering penetration and making the plough harder to pull.

The new plough shares from Kverneland have been designed from the outset to maintain

consistent penetration as they gradually wear. They are specifically designed to fit all Kverneland plough bodies and always give the best results - no matter what conditions are encountered





# **Original wearing parts**

We make the wearing parts competitors can not match

### We make the wearing parts competitors can not match

Kverneland has developed a brand new plough share with outstanding wear characteristics. At each share's heart is the finest steel in Europe, which has undergone a revolutionary new process of induction heat treatment. The result is a share hard enough to withstand the most punishing conditions, yet with the flexibility to resist impact shock loading and cracking.

The secret is in the way the process hardens the wearing regions far beyond any level previously achieved. At the same time it affords those areas around the bolt holes the necessary flexibility to avoid stress fractures.

Striking this balance means the share will last up to 20-25% longer, but will be just as effective at penetrating the soil. The benefit is a much longer interval before the shares have to be changed, and over the life of

the plough, a lot less time spent replacing wearing metal. Which is good news when you're trying to keep machinery costs low.





# **49 Times World Champion**

Since 1962, 49 World Championships in ploughing have been won by using Kverneland ploughs.

It is no accident that the Kverneland plough is chosen by competition ploughmen all over the world. First class ploughing quality under all conditions is a must for succeeding in competition ploughing.

You as an ordinary farmer enjoy the same quality and benefit from experience gained in competition. The comments and experiences we get from different parts of the world, will be used in our further development of mouldboard ploughs.

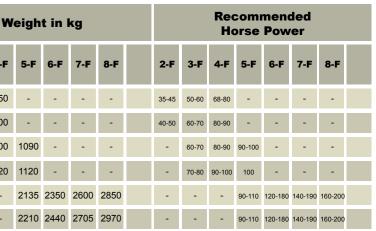
## **Technical Specifications**

Model (Auto-reset)					v			
Туре	Interbody Clearance in cm	Underbeam Clearance in cm	Number of Furrows	Furrow Width in cm	2-F	3-F	4-F	
AB	85	70 / 80	2 - 4	30 - 50	425	508	750	
AB	100	70 / 80	2 - 4	30 - 55	440	605	800	
AD	85	70 / 80	3 - 5	30 - 50	-	730	900	
AD	100	70 / 80	3 - 5	30 - 55	-	750	920	
BE	100	80	5 - 8	35 - 55	-	-	-	
BE	115	80	5 - 7	35 - 55	-	-	-	



1962, 1963, 1964, 1968, 1969, 1970, 1971, 1972, 1975, 1976, 1977, 1978, 1979, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994x2, 1995x2 1996 1997 1998 1999x2 2000, 2001, 2002x2, 2003x2, 2004, 2005x2, 2007, 2008, 2009x2, 2010x2 and 2011

Kverneland ploughs lead the way in World Ploughing Competitions - with conventional as well as reversible ploughs.







## **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 of systems and solutions to the professional farming community. The offering covers soil preparation, seeding, forageand bale equipment, spreading and spraying.







## **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.

## **Kverneland Group UK Ltd.**

Walkers Lane, Lea Green, St. Helens Merseyside, WA9 4AF Phone + 44 1744 8532 00 kverneland@kvernelandgroup.com

## **Kverneland Group Ireland Ltd.**

Hebron Industrial Estate Kilkenny, Ireland Phone + 353 56 51597 contact@kvernelandgroup.com

www.kverneland.com

