

HALDRUP PRODUCT CATALOGUE

Seeders Software

Special machinery

Plot combines Harvesting technology Lab machines



PRODUCT CATALOGUE

Preface



Bernd Kettemann, Management



Andreas Hessenthaler, Management

Valued customer,

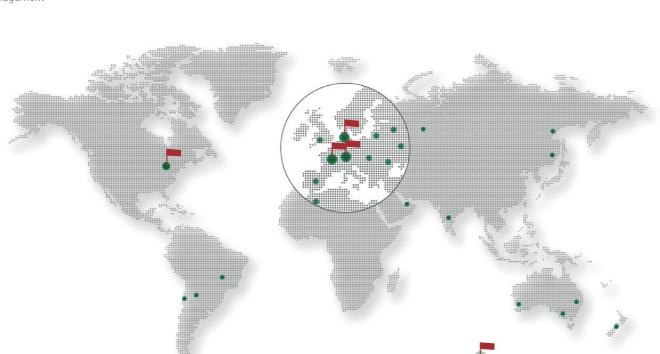
Since 1972, the HALDRUP brand has been well known for its optimum and individual solutions for seed breeding and field research worldwide.

Within this catalogue, you will find a selection of our products in the areas of combines, seeders, harvesting technology, software and data collection, and lab equipment.

In order to fulfill the increasingly high requirements of seed breeding and field research, HALDRUP develops and produces robust machines according to the highest quality standards. We strive to always provide you with innovative and trendsetting solutions to meet the demands of the industry.

Our highly qualified team is at your service in order to develop machines which are tailored individually to your requirements and needs as well as to help you achieve better goals in the area of research.

Go ahead and challenge us!



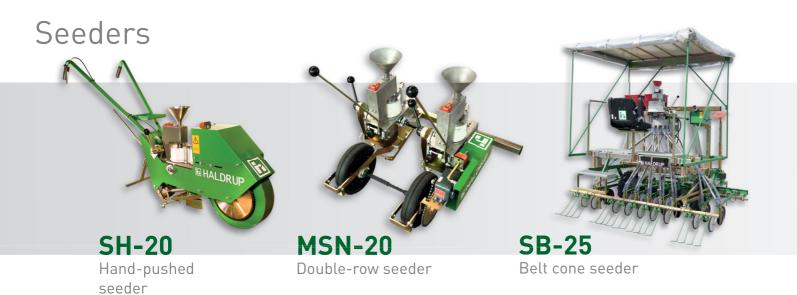


Plant breeding research is of great importance worldwide when it comes to meeting global challenges, as the demand for food is strongly increasing with the growing global population. According to Stiftung Weltbevölkerung (Foundation for World Population), the UNO has adjusted its 2013 projection and is now estimating an increase in the world population from 7.3 billion today to approximately 9.7 billion people in 2050 (source: n-tv.de, fma/AFP). By providing continuous progress, plant breeding research forms the basis for an outstanding increase in agricultural productivity in order to meet this challenge.

Breeding research is the most sustainable method to increase agricultural productivity and thereby benefit our society.

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SNT-25 Seeder for direct seeding







SD-50 with SP-35 Self-propelled seeder with single grain technology

Plot combines and harvesting technology







CTS-95

Double plot combine Twin Shaker









Swath mower Maize sample taker

Grass harvester

4 **i**











Abrechen



Near infrared spectroscopy

GC-30

1000 grain counter





HALDRUP SH-20

Hand-pushed seeder

Hand-pushed seeder for small breeding yards, show beds and greenhouses



HALDRUP MSN-20

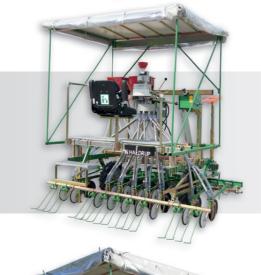
Double row seeder

Specially developed double row seeder for connection to a rotary cultivator



HALDRUP develops and produces seeders since 2001.

Our product range extends from a simple, hand-pushed seeder to self-propelled models with single grain technology to machines equipped with country-specific coulter systems and options which have been tailored to specific customer requests. We use only high-quality materials, such as stainless steel for our belt cones and seed tubes, for the production of our machines.



HALDRUP SB-25

Belt cone seeder

Belt cone seeder for all types of crops, from grass to cereals to beans



HALDRUP SR-30

Single row seeder

Single row seeder with magazine table and individual belt cones. This machine fulfills all conditions of breeding, particularly of the 1st generation.





















HALDRUP SNT-25

Seeder for direct seeding

Worldwide, direct seeding is becoming more and more important. We have therefore further developed our standard seeder. The SNT-25 is equipped with a strong frame in order to comply with country-specific requirements regarding direct seeding.



HALDRUP SD-50

Self-propelled seeder

All components of an SB-25, SR-30 or single grain seeder are fit to upgrade this tool carrier.

DETAILS

MACHINE CONTROL

HALDRUP offers several seeder control systems. CU, SCU or SCU Count controls may be equipped with options such as GPS, ground wheel or cable control, which allows for ideal working conditions without field markers.







Magazine table, belt cone system, or cen-tral distributor provide for the best possible distribution of grains.



COULTER SYSTEMS

HALDRUP seeders may be equipped with a variety of country-specific coulter systems, in order to adapt the machines to different soil conditions and our customers' requirements.





GEARBOX

The continuously variable HALDRUP gearbox provides for simple and exact setting of the plot length.

ADDITIONAL OPTIONS

Upgrade your HALDRUP seeder with numerous additional options to meet all requirements and requests:

- CU, SCU and SCU Count control
- ▶ GPS control
- Ground wheel drive
- Cable control
- ► HALDRUP SeedManager software

- Fertilizer spreader
- Granulate spreader
- Automatic air flow cleaning of the belt cone for fine seeds
- Exact harrow

- Track marker
- Protection against wind and
- Automatic slope equalizer
- Lights







HALDRUP SD-50 with SP-35

Self-propelled seeder

The tool carrier can be equipped with HALDRUP SP-35 single grain technology with NC elements. All options of an SP-35 can be incorporated.

HALDRUP SP-35 with NC technique

Single grain seeder

NC technique allows for seed placement with very exact distances, and several options for depth control. An ideal element for cereals, canola, vegetables, beans, sugar beet, soy, sunflower, maize etc.

SINGLE GRAIN SEEDERS Highest precision for single grain seeding

When it comes to single grain technology, we at HALDRUP benefit from our extensive experience, simple seed change with precise grain distance and adjustable depth control. Here, the combination of HALDRUP and MONOSEM elements is of fundamental importance.

Various distribution systems and a varied module system allow for customer-specific setup of the single grain seeder.

This allows for the combination of various seed elements with Monosem elements to ensure proper seed placement for all types of soil conditions.



HALDRUP SP-35 with NG+

Single grain seeder

Use NG+ to achieve an incomparable seed quality and optimum depth control even with difficult soil conditions. This technique is mainly used with maize, sunflower, soy, beans etc.



HALDRUP SP-35 with NX

Single grain seeder

NX technique is perfectly suitable for seeding after only minimum tillage or on particularly hard soil. The range of application complies with that of NG+ technique.





HALDRUP C-60

Plot combine

The HALDRUP C-60 is a powerful and strong plot combine with a spacious driver platform, which allows for direct access to inclined conveyor, threshing drum and concave for quick cleaning. A cutting unit with airflow cleaning can be installed instead of the conveyor.



HALDRUP C-65

Plot combine

The HALDRUP C-65 is a compact harvester with high impact, which can be equipped with many options of a larger machine. The spacious cabin provides both driver and operator with enough room for ideal working conditions and storage of samples and bags. It is perfectly built for threshing cereals due to its compact design.

PLOT COMBINES built for the toughest requirements

HALDRUP machines are well known for their durability and strength. The first HALDRUP plot combine, the HALDRUP 850, was produced in 1985. Many developments and improvements have been made since then which paved our way to the production of high-performance plot combines. Thanks to customized design adaptions, your HALDRUP machine can be built according to your specific requirements.

Use a HALDRUP plot combine for threshing of various crops, such as cereals, canola, maize, soy, beans, sunflower, grass, and more. You may choose between several cutting units and cutting bars for meeting your harvesting needs.



HALDRUP C-85

Plot combine

The HALDRUP C-85 is a reliable plot combine which has provided its owners with high productivity and throughput for more than 20 years now. Behind the power of its 108 HP engine, it can be used for threshing of all kinds of crops, such as maize, soy, cereals, canola, and more.

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HALDRUP CTS-95

Double plot combine Twin Shaker

Use the powerful HALDRUP CTS-95 Twin Shaker to harvest two plots parallel in one process. The HALDRUP CTS-95 is equipped with two fully separated harvesting, threshing and cleaning systems - eliminating the potential of mixing of the plots.

DETAILS

CABIN

Spacious and clear cabin for up to two operators with excellent view of all operating elements, cutting unit and field. The large cabin also includes creature comforts such as air conditioning, radio, and optional heating as well as ample space for whatever the day may require.





ANALYSIS

The HALDRUP weighing system, volume box, moisture sensor or NIRS, among others, are available to analyze the crops. The systems work perfectly well with the HALDRUP Harvester data collection software.





HALDRUP cutting units are available in widths from 49 1/4" (1250 mm) to 118 ½" (3010 mm). Available options are instruments such as table extension, horizontal reel adjustment, cutting unit and cutting bars for soy, maize and



ADDITIONAL OPTIONS

... what's special: HALDRUP machines are powerful, strong and can be used for threshing of almost all kinds of crops, and they can be transported on regular truck trailers. You want more? These additional options are available:

- NIRS (Zeiss, Polytec or Perten)
- Moisture measurement
- Camera surveillance
- ▶ Volume box
- Weighing system
- ▶ GPS control
- Bagging

- ► HALDRUP HarvestManager Software
- Customer-specific software

⊞HALDRUP 17 16 HALDRUP





HALDRUP F-55

All over the world, our grass harvesters have been successfully harvesting research plots since 1972. The HALDRUP F-55 is suitable for whole-crop harvesting of forage plants as well as medical herbs and spices. The spacious cabin provides enough room for two operators, and samples can be taken easily.



HALDRUP D-45

Parting and swathing can both be accomplished with this unique machine. Thanks to the hydraulic adjustment feature, the swath mower can be perfectly adjusted to the width of your plots. The HALDRUP D-45 can be equipped with wheels or a caterpillar drive system.

HARVESTING TECHNOLOGY Strong and effective

In 1972 – after the company's foundation – HALDRUP started the production of the first grass harvester. HALDRUP harvesters are equipped with all technical features which are required to harvest all kinds of grass, alfalfa, clover and energy crops.

Already in the 1980s, HALDRUP was the first supplier to produce a very strong and effective swath mower for parting and swathing of canola plots – the HALDRUP D-45.

HALDRUP offers two different machines for harvesting of maize and energy crops. The HALDRUP M-63 can be attached to any standard tractor with three point attachment which makes it suitable for universal use. The HALDRUP M-65 is a powerful, self-propelled maize harvester.



HALDRUP M-63

Maize harvester

The HALDRUP M-63 in combination with a standard tractor and a row-independent cutting unit is an ideal setup for a successful maize and energy plant harvest. Many options are available to make this machine suit perfectly with your requirements.



DETAILS











For the short time period between harvest and the next sowing, breeders need quick and meaningful analytic processes in order to improve the crops' quality. Here, near infrared spectroscopy (NIRS) has proven its effectiveness as data can be taken directly from the field, reducing the time needed for collection of information and, ultimately, interpretation of the data.





■ COMPACT

HALDRUP harvesters are compact, yet robust. They have been designed for harvesting under the most difficult



HALDRUP M-65

Maize harvester

The HALDRUP M-65 base machine consists of the rotor sample taker and a weighing system. It has been continuously developed according to the latest technology in order to comply with today's requirements in the field research industry.

ADDITIONAL OPTIONS

... the HALDRUP harvesters HALDRUP F-55, HALDRUP M-63 & HALDRUP M-65 can be equipped with numerous additional options:

- NIRS (Zeiss, Polytec or Perten)
- GPS control
- ► HALDRUP HarvestManager software
- Camera control
- Sample taking

Only for HALDRUP D-45:

- Caterpillar drive
- Hydraulic width adjustment
- Driver platform roof





HALDRUP LT-15

Lab thresher and cleaner

The HALDRUP LT-15 is a lab thresher and cleaner for single plants. Almost all kinds of cereals can be processed with this compact and handy table-top



HALDRUP LT-20

Lab thresher and cleaner

Use the HALDRUP LT-20 for threshing of multiple plants in one process. Particularly suitable for threshing of canola and soy.

LAB MACHINES

... technique for the lab and the field

We have been providing our customers with lab technology since 2008. All main components are made of stainless steel in order to avoid static charge. Among the advantages of a HALDRUP lab machine are the clear view on all threshing elements, the simple maintenance as well as the quick and simple access to clean the machine.

Our lab machines offer a variable adjustment of cleaning system and speed of the threshing drum and allow for the exact control of the threshing process – and, therefore, a result with maximum purity.



HALDRUP LT-21

Lab thresher

The HALDRUP LT-21 is a compact lab thresher for single plants or small ear bundles, equipped with a threshing drum and concave.



HALDRUP LT-35

Lab thresher

The HALDRUP LT-35 is a lab thresher for ear bundles and small plots suitable for threshing of almost all kinds of crops such as cereals, canola, soy and



HALDRUP LT-50

Lab thresher

The highest throughput when threshing large ear bundles and whole plots. Perfectly suitable for sunflower and maize thanks to the sealed door of the threshing unit.



HALDRUP DC-20

Densimetric sorting and cleaning column

The ideal machine for cleaning and sorting, from small seeds such as canola up to large seeds such as beans.



Grain counter and filling machine

The GCP-20 with its removable carousel, roller transportation and automatic filling process counts grains at high-speed and with great precision. Perfectly suitable for sunflower, maize, soy and beans.



HALDRUP GCP-30

Grain counter and filling machine

The HALDRUP GCP-30 grain counter and filling machine counts seeds at high speed and with great precision. It also bags seeds in individual quantities. Perfectly suitable for canola, cereals, sunflower, maize, soy and beans.

DETAILS

CONCAVES & SIEVES

Selection of various concaves or sieves for optimum threshing results with different crops.







CONTROL

Simple machine control. Individual setting of motor, blower, and flap closing times for adjustment to all kinds of crops.

USE & RESULT

Clean separation of grains, dust and chaff. Thanks to their mobility, HALDRUP lab machines can be used almost anywhere power is available.



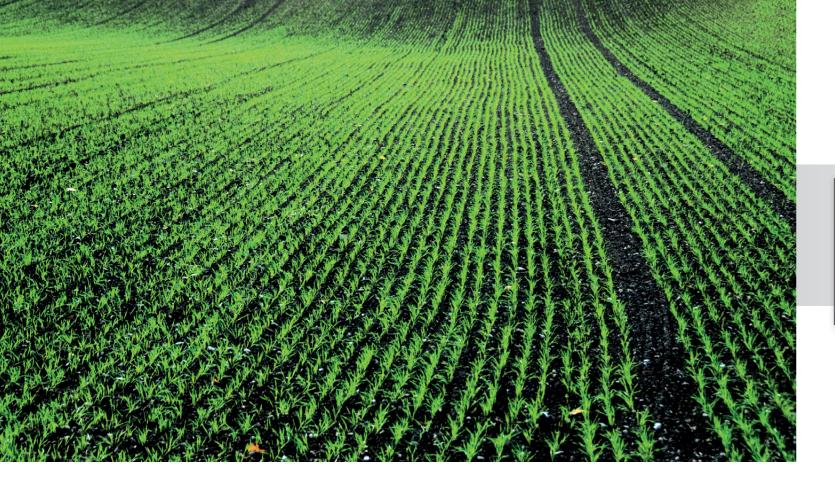




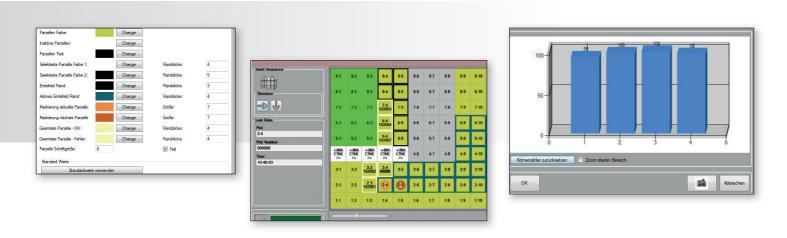
HALDRUP GC-30

1000 grain counter

The HALDRUP GC-30 counts grains at high speed and with the greatest precision.



HALDRUP SeedManager Sowing software



The HALDRUP SeedManager is a modular system for the collection and analysis of data while sowing which allows for satellite-based field work. Use the HALDRUP SeedManager to set different parameters for the seed cycle.

The HALDRUP SeedManager logs course and quality of the sowing process.

HALDRUP HarvestManager Harvesting software



HALDRUP HarvestManager is a modular system for the collection and analysis of data while harvesting which allows for satellite-based field work. Use HALDRUP HarvestManager to monitor the harvesting progress reliably even in large fields.

Use HALDRUP HarvestManager to set different parameters for the harvesting cycle.

HALDRUP HarvestManager logs course, crop yield and quality of the harvest process and enables you to print results and export them in a CSV format.





NIRS NIRS – near infrared spectroscopy

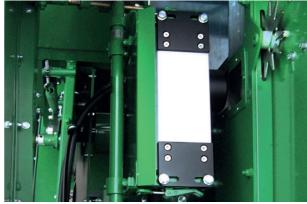
Breeders need quick, cost-efficient and meaningful analytic processes to get real-time information on crop quality parameters without having to wait for lab results, as there is only a short time period between harvest and next sowing.

NIRS (near infrared spectroscopy) has proven to be a well-suited instrument in this regard. Available options are to analyze the quality of crops, animal feed and food, water index studies as well as cereals and plant yield. On-board NIRS allows breeders to capture the parameters of every single harvested plot, eliminating the time and expense of lab-based data collection processes.

DETAILS







ZEISS Corona NIR spectrometer on a HALDRUP F-55 grass harvester



POLYTEC NIR spectrometer system on a HALDRUP C-65 plot combine

NIRS analyzers can be equipped with distance or direct measuring heads. The distance measuring head measures plants from a distance of only a few millimeters up to 25 centimeters (ca. 0.05" - 9.84"). If the machine is equipped with a direct measuring head, the plants pass directly by the lens of the spectrometer. The measured data is saved on a PC which is located in the cabin, and results are collected by the HALDRUP Harvest-Manager software.





We design and build the most suitable machine for you – according to your specific requirements.

Benefit from our extensive experience in special machine construction combined with our know-how in agricultural field research.

We have realized a number of projects successfully in the past, and will rise to any challenge.

Go ahead and challenge us!















HALDRUP Approved warranty Protection and security

Our goal is our customers' satisfaction with their HALDRUP machines. Therefore, we offer our extensive range of services as well as the complementary warranty protection. Our HALDRUP Approved warranty gives your HALDRUP machine protection and security at the level of a brand-new machine.

The advantages:

- Europe wide validity
- Choice of 12 or 24 months term
- Covers all important components
- No deductible in case of damage

 Assumption of wages and material costs up to current machine value



SERVICE HOTLINE: +49 (0) 7904 94 3998 140

HALDRUP quality At HALDRUP, quality is paramount!

HALDRUP is among the leading field research machine producers since 1972. The greatest achievements during these years are the quality and service which HALDRUP offers.



Planning ...

Designing our machines in 3D allows for a drastic reduction of planning errors. Issues can be detected and avoided prior to building the machine due to simulations in the 3D presentation.



Production ...

Production and assembly are done in-house, and individual machine adjustments can be realized.



Quality control ...

During production and prior to delivery, all HALDRUP machines are tested by our skilled service team in order to ensure the best quality possible for our products.



Vocational training ...

We are passing our knowledge on to the next generation and offer the following vocational trainings: industrial clerk, industrial mechanic, technical product designer for machines and plant construction, IT specialist and Bachelor of Engineering.

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HALDRUP CHRONICLE

... our experience is built into our machines!



inotec Engineering assumes sales representation of HALDRUP harvesters in Germany



Launch of plot seeders. Development and production of further seeders during the following years.



Beginning of production

of plot harvesters for field research

the extension of the production site in Denmark enables the production of various machines: swath mower, maize harvester & maize unit, tool carrier...



Foundation of J. HALDRUP a/s in Denmark and production of grass harvesters



Foundation of inotec Engineering GmbH in Ilshofen, Germany





Development and production of the first lab threshers



2005-2007

Production of the "large" plot combines Twin Axial and Twin Shaker



2015

2016

further expansion of the administration and production areas in Ilshofen, Germany

HALDRUP USA moves into its

production site in Ossian, USA

· new administration and



2010

 HALDRUP invests in the expansion of its production site in Ilshofen, Germany



Development of the HarvestManager software for harvesters



2007

inotec Engineering GmbH moves into its new production site in Ilshofen, Germany

Merger of the inotec

and HALDRUP brands



HALDRUP

of HALDRUP USA:

2014 Foundation •

in Indiana:

Foundation of a service and sales office in Sargé-les Le Mans, France





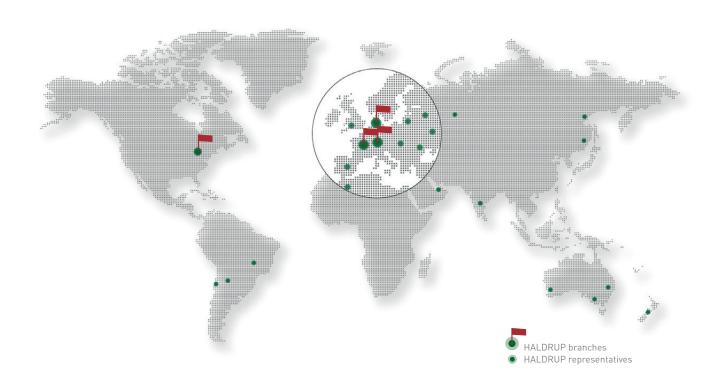
J. HALDRUP a/s settles in Løgstør, Denmark with factory and administration building











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