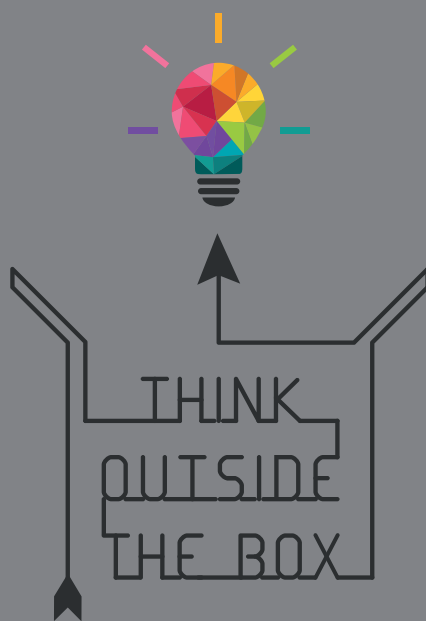


BISO 3D VARIOFLEX • AIR • i



 **BISO**
HARVESTING TECHNICS


always one step ahead!

BISO ALWAYS ONE STEP AHEAD



For the modern farmer the most important thing is to harvest all crops efficiently and as fast as possible without losses. To achieve these goals we have focused our development around the following specific points:

- > **Weight optimization while increasing stability for cutting widths up to 18,5 m**
- > **Absolute continuous material flow to the threshing elements of the combine**
- > **Harvesting of different crops without setup times**
- > **Intelligent cutter bar adjustment to ground contours**
- > **Minimizing losses on the cutting table**
- > **Precise cutting of the crop to the desired height**
- > **Efficient and safe transport of the machines both on the road and in the field**
- > **Incomparable life time**

The development of BISO harvesting machines is comparable to tuning a car. The combine manufacturers supply the solid base model – We make it into a winning “racing machine”, which fulfils specific customer requirements perfectly.

If we have aroused your interest, we look forward to your call or e-mail.

Your
BISO Team

VX CROP RANGER



2001

ULTRALIGHT 800



2009

3D VARIOFLEX •AIR•i



2019

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BISO 3D VARIOFLEX •AIR•i

BISO 3D VARIOFLEX •AIR

BISO 2D VARIO



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BISO 3D CUTTER BAR

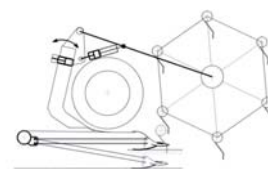
THREE-DIMENSIONAL OVER PARALLELOGRAM
INTELLIGENT CONTROLLED CUTTER BAR
WITH AIR SUSPENSION



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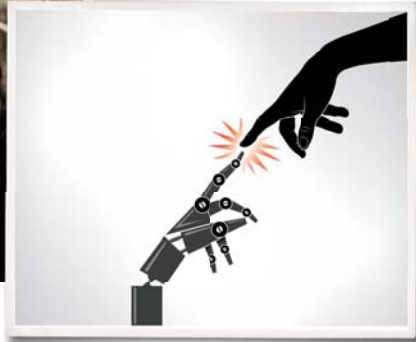
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HEADER TRAILERS

- > PROFI
- > PROFI STEER





THE MODULAR BISO 3D HEADER RANGE

EFFICIENT, STRESS-FREE HARVESTING STARTS
WITH A PREMIUM HEADER.

The modular BISO 3D header range – built for your demands.

3D VARIOFLEX • AIR • i

Parallelogram controlled flex cutter bar 170 mm (constant cutting angle 10°)

Maintenance free 800 mm variable cutter bar & floor

> fully autonomous intelligent controlled flex cutter bar stable ground pressure over the whole header width

> each arm intelligently controlled – independent of each other

> ground pressure freely selectable, specified value from 0–50 kg from the touchscreen in the cab

Air suspension for each flex arm parallelogram

variable, flexible cutter bar with header frame angle adjustment

The following models are available for your choice

BISO 3D VARIOFLEX • AIR • i

BISO 3D VARIOFLEX • AIR

BISO 2D VARIO



INTEGRATED AIR
COMPRESSOR WITH
AIRFILTER

INTEGRATED
WRAP PROTECTION
FOR REEL

FUNCTIONAL
SPLASH GUARD

REEL TINE ATTACHMENT
BRACKET

ELECTRICAL REEL TINE
ADJUSTMENT

INTELLIGENT REEL /
COLLISION CONTROL

INTELLIGENT FLEXIBLE
CUTTERBAR CONTROL

800 MM CONTINUOUS
CUTTERBAR ADJUSTMENT
STAINLESS STEEL

CONTROLLERBOX
TOOLBOX

FOLDABLE SIDE KNIVES

OIL TANK
HYDRAULIC TANK
WATER TANK
LUBRICATION TANK FOR CHAINS

HYDRAULIC ANGLE
ADJUSTMENT

HYBRID LIGHTWEIGHT
FRAME 5,7M-18,5M

UNIQUE THE BISO 3D • AIR • i CUTTER BAR

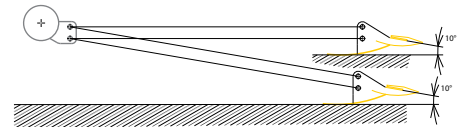
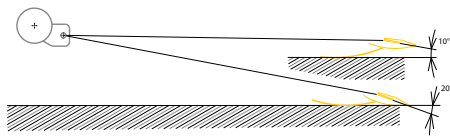
3D • AIR • i – THE UNIQUE FLEX CONCEPT

three-dimensional over parallelogram

intelligently controlled cutter bar with air suspension

- > **fully autonomous intelligent controlled flex cutter bar** in one header with variable floor. The **ground pressure is measured** at the cutter bar near the **parallelograms** by **intelligent sensors**. The electronic control **air bellows & pneumatic valves** and **permanently** adjust in Y-direction the parallelograms to the **needed height** on the basis of pre-selected **ground pressure** (possible variable target – **0–50 kg – stepless**). This makes it possible to **follow the ground contour** (possible cutting height 25 mm)
- > Through the parallelograms the **cutting knife** is only stressed for pure **bending** and reduces the force at the drive as well as wear and tear.

Stable cutting angle of the cutter bar and ground pressure in each position of every single flex arm.



Flex arms

WITHOUT parallelogram changes the **cutting angle** of the cutter bar **more than 10°** – this means the cutting angle changes up to **more than 20°**.

Soil accumulates pretty fast at the cutter bar. Due to steady cutting angle changes, the **cutting knife is twisted**, the power at the drive increases disproportionately.

Flex arms

WITH parallelogram – the **cutting angle** of the cutter bar stays **constant at 10°** at **each position** of every flex arm. **No possible twisting** at the **cutting knife** – **lower cutting forces** at the drive in comparison with existing systems.



> 3D VARIOFLEX • AIR • i

The **flex arms** – **controlled by parallelograms (steady cutting angle)** – are controlled intelligently by the sensor skids at the cutter bar through air bellows and pneumatic valves.

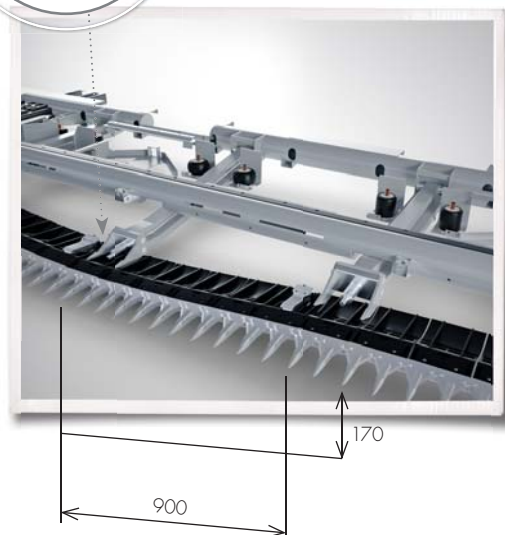
All arms are **moved independent** of each other.

This makes it possible, for the first time, to follow the **ground contour** actively.

The **ground pressure** can be **pre-selected** comfortably at the touchscreen **in the cab** – **adjustable from 0–50 kg** in a linear way (each flex arm keeps the ground pressure independent of each other).

THE ADVANTAGES, OF COURSE, ARE OBVIOUS:

- > the cutter bar **doesn't accumulate soil**
- > **applicable** also in **soggy soil** harvesting conditions
- > works ideally in **all soil conditions**
- > **stress-free harvesting** under adverse conditions
- > extremely **favourable** for **laid crops**
- > minimum **cutting height 25 mm**
- > switch-over from **rigid to flexible** cutter bar from the cab in seconds
- > **uniform stubble height** – perfect for following soil cultivation – no future harvest losses
- > **higher harvesting speed** in difficult conditions
- > **optimal** for soybean harvest and near-ground fruit setting

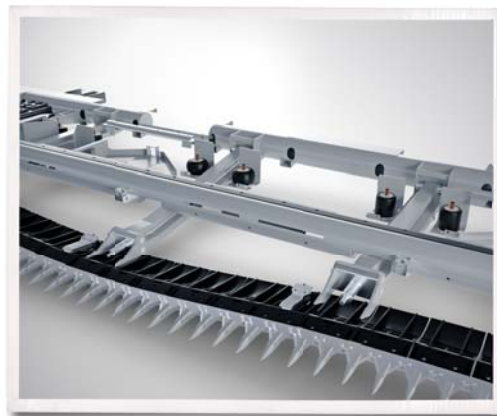


> 3D VARIOFLEX • AIR

The **flex arms** – **parallelogram controlled (constant cutting angle)** – **float** and are pivoted through **air bellows**.

According to the required ground pressure the flex arms can be controlled by the air bellows on demand through air pressure.

A **cost effective** solution in comparison to the 3D • **AIR • i** model.



> BISO VARIOSYSTEM SUPPLEMENTED BY THE FLEX FUNCTION

- > PROVEN
- > ROBUST
- > RELIABLE

The **vario system** – a **successfully proved, maintenance-free system** for the **varied harvesting tasks** (different cereals and harvesting conditions as well as for different soil conditions).

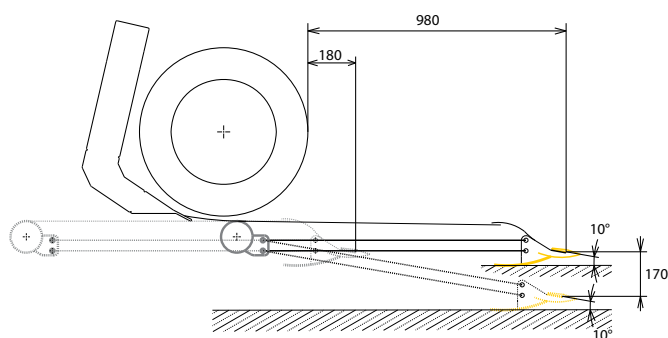
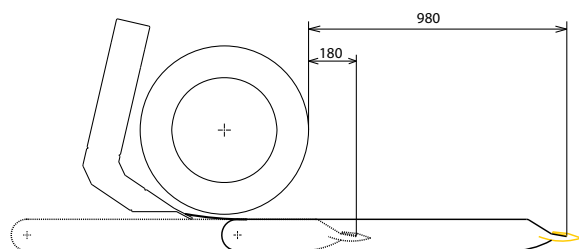
To enable problem-free harvesting of short crops, the distance between the **auger and the knife** has been reduced to 180 mm.

Due to the **800 mm stepless** adjustable cutter bar (and extended by the **flex floor**) crop flow into the BISO 3D is constantly transported **"head-first"** to the intake auger with very little use of the reel.

This uniform feeding increases the total output of the combine. When completely retracted the cutter bar is only 180 mm away from the intake auger, which results in huge advantages when harvesting a short crop, an unique selling point of the 3D header.

The **flex arms** can move in a maximum range of **170 mm** – **between each single arm**.

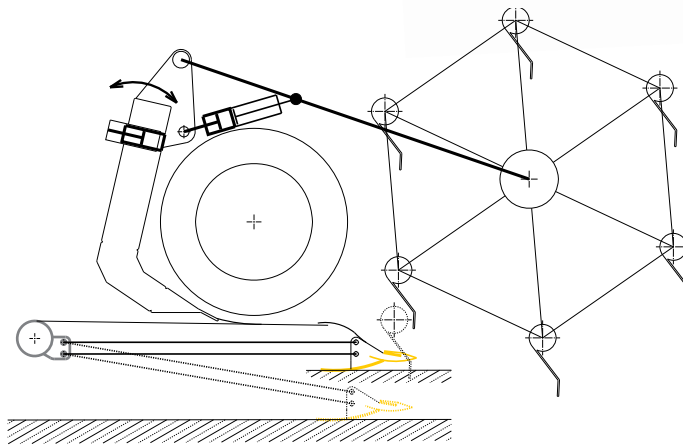
This is only **possible due to the controlled parallelogram** – a **unique feature**.



UNIQUE INTELLIGENT REEL-CUTTER BAR COLLISION CONTROL

3D VARIOFLEX • AIR • i

The 3D VARIOFLEX • AIR • i header model is equipped with **intelligent collision control** – an **absolute highlight**.



For perfect working, the reel as well as the reel tines **must work underneath** and **close to the cutter bar** (to lift the laid crop). In reality the flex headers follow the ground contour.

Due to this a **collision** between the **reel tines** and the **cutting knife** can occur and this can **damage** the header (reel tines are cut or bent or, at worst, damage occurs to the drive).

Due to the **intelligent “i” solution** this is **prevented** and

- > **close work to the cutter bar is enabled**
- > **proven reel tines** (made of spring steel) can be used

Additional vertical cylinders are activated by the sensors and in case of a collision the reel is moved out of the danger zone.



integrated hydraulic reel drive **in the main tube**, smooth crop floor



wrap protection – reels – quick change system



electric cylinder for reel tines **angle adjustment**



GROUND BRAKING HYBRID LIGHTWEIGHT TECHNOLOGY



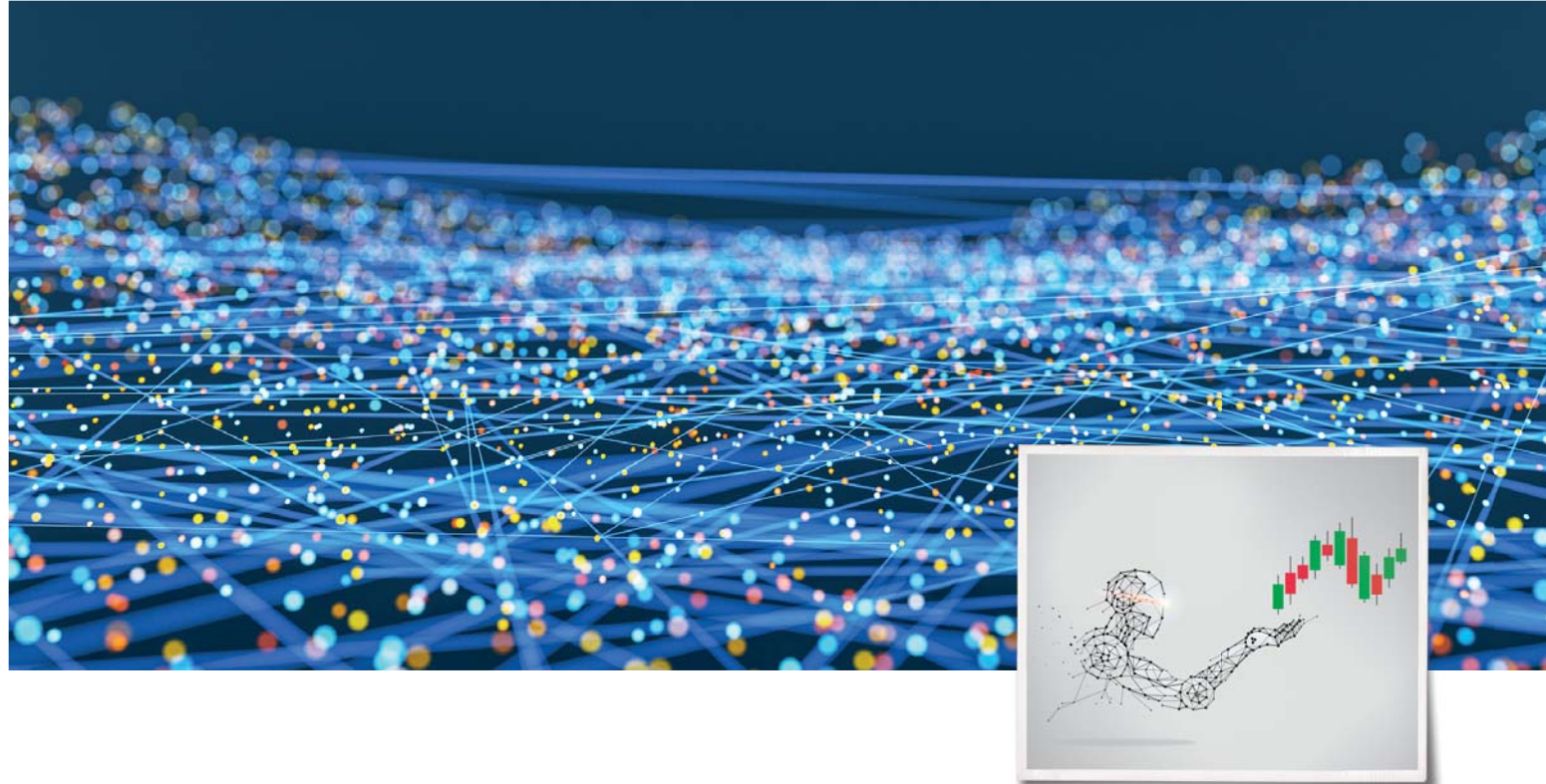
THE BISO 3D HEADER RANGE OF 6,7–18,5 M

is the **“ultimate” feature for the professional** and sets new standards in harvesting technology.

It opens a new dimension in fast and loss-free harvesting in all soil- and crop conditions, and this is available for **cutting widths up to 18,5 m**. By using lightweight technologies from the airline- and car industries the **header frame** is made of **aluminium**, combined with **high strength steel and stainless steel**, which is the basis for this unique header range. In terms of torsion, bending stress and lifetime, the pure **steel construction reaches from 9 m to its limits**.

This unique combination of materials results in a **hybrid frame** that allows **weight reduction**, which is especially needed for large cutting widths whilst **increasing stability**. The hybrid frame also passed its endurance test easily, so future technologies used in the design process have also been confirmed in the laboratory.

These **high quality materials** are also used on the **moving parts** of the BISO 3D, the **intake auger** and the variable bed are made of stainless steel, achieving a **superior flow of material** into the combine.



TABLET-PC TOUCHSCREEN – STATE OF THE ART

A STATE OF THE ART TABLET-PC WILL BE DELIVERED WITH THE 3D VARIOFLEX • AIR • i HEADER.



- > clear display of all functions for **simple and intuitive use**
- > **13 inch screen size**
- > header – cab wireless
- > GPRS
- > Internet ready – insert SIM card – that's it
- > Video & pdf operating manual
- > parts catalogue
- > online parts ordering
- > **software updates free of charge via the Internet**
- > visualization of all functions
- > **real time display of flexible cutter bar movement while driving**
- > the tablet-PC can be used for other operational purposes



> OPTIONAL HIGHLIGHTS

RAPE

BISO Vario headers are the only ones on the market where it is truly possible to **change from cereals to rape in less than five minutes**. Only the crop dividers have to be removed and put onto the bracket of the header trailer. The integrated side knives are folded up hydraulically and very easily – an absolute “highlight”. **Therefore lifting and mounting the side knives is now a thing of the past**. Something our competitors cannot match. Simply move the **cutter bar 800 mm forward** and you are able to start harvesting rape.



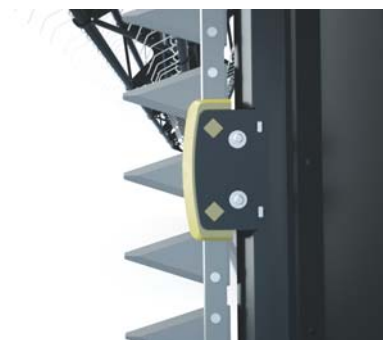
RAPE SEED HARVESTING POSITION



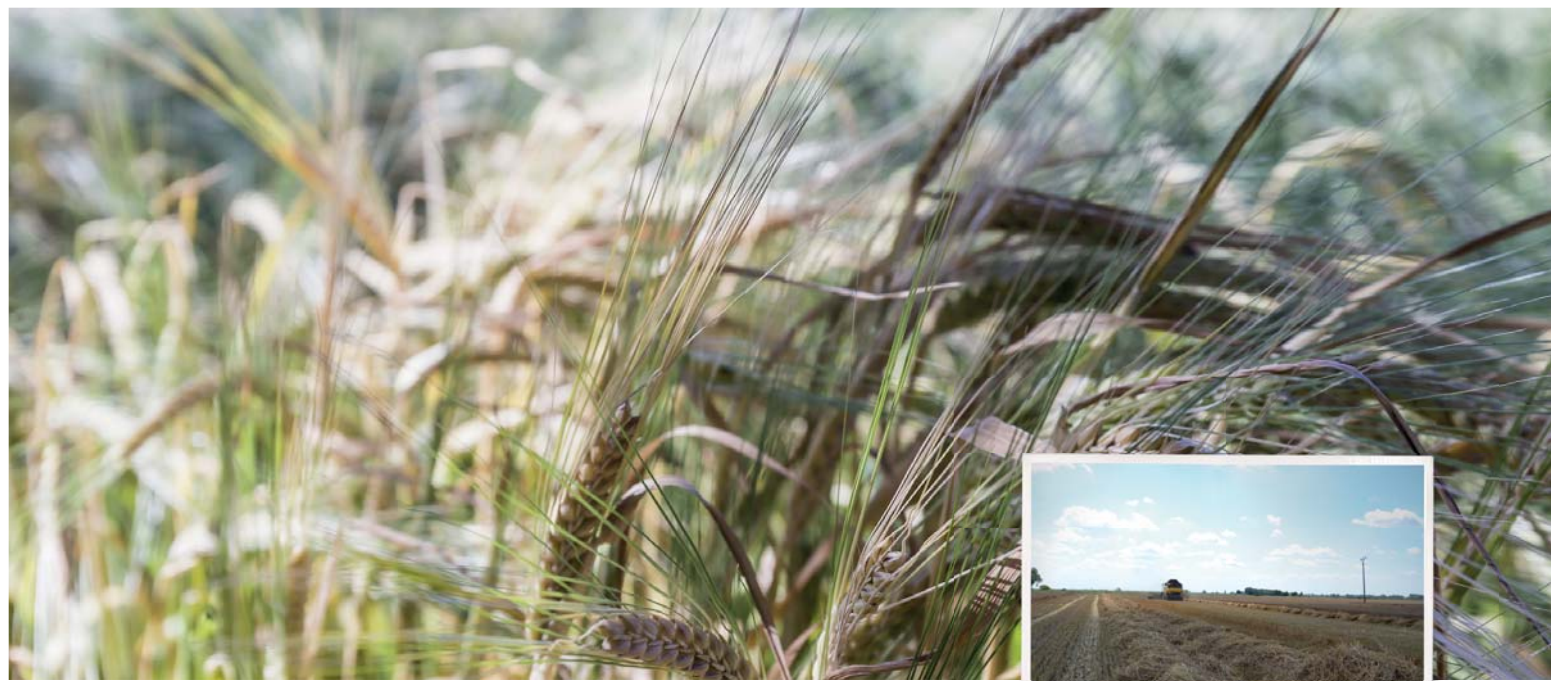
COMBINATION DIVIDER & SIDEKNIFE
PERFECT FOR MATTED CROPS



SIDE KNIFE IN PARKING POSITION



2-POINT SLIDING GUIDE



> OPTIONAL HIGHLIGHTS

2 PHASE HARVEST

AN EFFECTIVE, COST EFFICIENT SOLUTION

In some regions it's sometime essential

- > due to **weather conditions**
- > due to the **fact** that not all crops are at the peak of ripeness
- > due to **climate conditions that the different stages of ripeness are stopped by making swaths.**

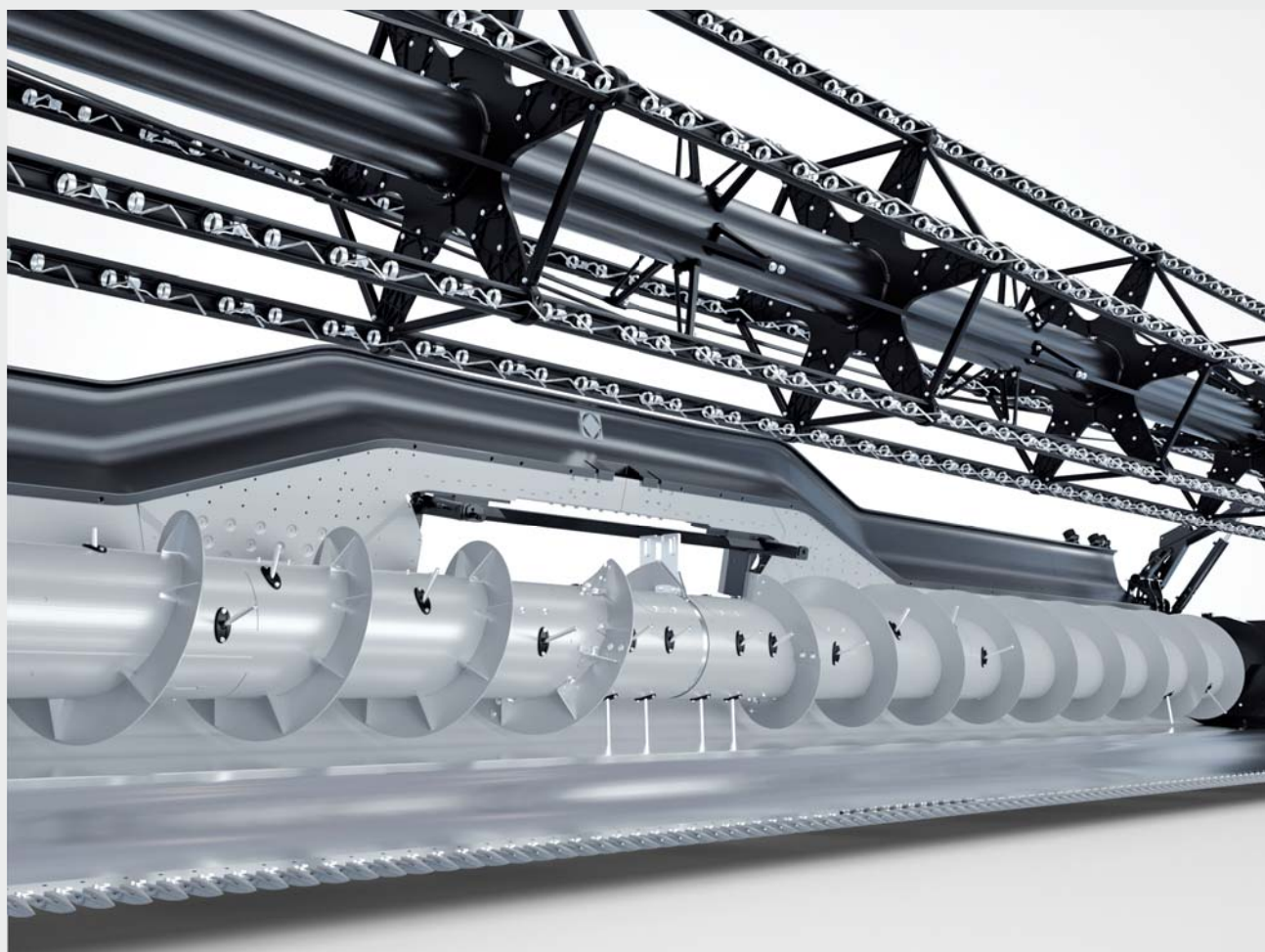
BISO **offers a cost efficient solution integrated in the header –**

- > the auger flights can be changed in direction
- > the header has an additional cut-out for swaths on the right hand



> FUNCTIONAL SPLASHGUARD

- > OIL TANK
- > GREASE TANK
- > WATER TANK
- > ELECTRONIC CABINET
- > TOOLBOX





ONE HEADER FOR ALL CROPS

BISO 3D VARIOFLEX • AIR • i

Demands on header technology are increasing.

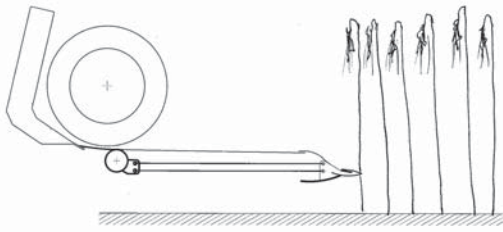
The number of different harvest crops are more than ever in some regions and extreme harvesting conditions or the influence of the weather increase the demands on header technology.

PRACTICAL FEATURES AT A GLANCE:

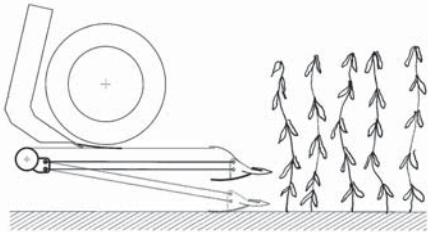
- > no additional header or attachments for special crops
- > harvesting different crops without time consuming adjustments of the header
- > no additional maintenance due to its simple, reliable floor structure – keeping the proven variosystem
- > no losses due to its intelligent ground-following system – Flexmode
- > the smallest distance for the auger – cutter knife – is only 180 mm, excellent for short crop harvesting
- > with correct application the ears of the grain come first to the threshing drum – excellent performance of the combine
- > practical application for all known crops
- > stress-free harvesting – clear relief of stress on the driver

- > extremely short barley
- > laid grain
- > harvesting of cereals and rape seed in same time window
- > extremely matted cereals
- > high demand on uniform stubble height (following soil cultivation)

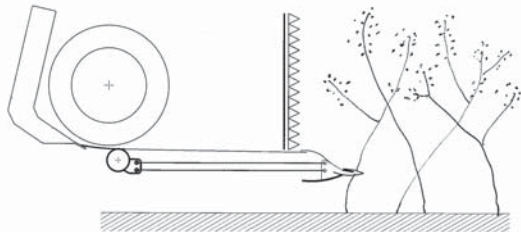
A



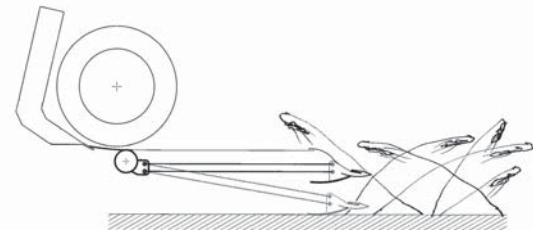
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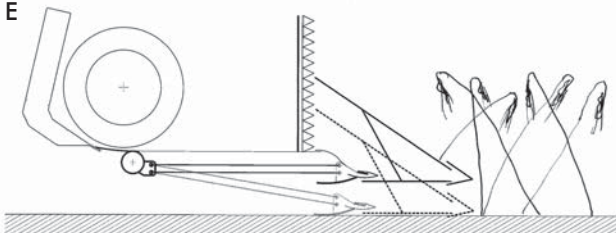
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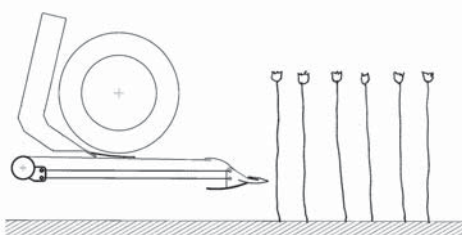
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E



F



TECHNOLOGICAL HIGHLIGHTS AT A GLANCE



for all cereals and crops

- > uncompromising technology – all functions for harvesting crops in one header
- > no time-consuming adjustments
- > proven – robust – reliable

FLEX TECHNOLOGY

- > **flex function control** fully **autonomously intelligent** thanks to **parallelogram**
- > an **even cutting angle at each position** of the flex arm
- > **cutting knife not twisted in flex mode &** significant power reduction at the drive
- > **ground pressure** of the cutter bar **intelligently** controlled by sensor system **stepless selectability** over the touchscreen from **0 to 50 kg**, all **flex arms** work **independently of each other** up to a height of 170 mm
- > minimum cutting height 25 mm
- > switch-over from **rigid to flex mode** for the cutter bar **from the cab** (in a second) **perfect** for changing harvesting conditions, uniform crops and **laid crops uniform stubble height** over the whole cutting area
- > **reel collision control** **close working of the reel tines with the cutter bar** – during danger of collision the reel is pushed out from the collision area by the intelligent control (reel tines made of spring steel to keep maximum force when harvesting a **laid crop**)

VARIO TECHNOLOGY

- > the **reliable, maintenance-free and proven** Vario floor technology enables **minimum harvesting losses at the cutter bar**
- > in the correct application the **ears** of the cereals **enter the threshing drum first** and increase the performance of the combine
- > **Vario floor 800 mm travel, minimum distance – cutting knife – auger 180 mm** – perfect for short crops

FRAME

- > **modular hybrid frame**, a combination of high strength steel, stainless steel- and aluminium profiles enable:
- > a much **longer lifetime**
- > **torsion-resistant** frame up to widths of 18,5 m

INTEGRATED SIDE KNIVES

- > no time-consuming adjustments for rape seed harvesting
- > the **use of side knives is also perfect for matted crops**
- > the **combination of side knives & crop dividers & flex mode** are ideal for harvesting **laid crops** and so on



> BISO PROFI STEER

PROFI STEER is the ultimate feature under the header trailers. The trailer is characterized by the hydraulic rear steering axle, which ensures **excellent manoeuvrability** even on tight corners or going around roundabouts, so the **moving of large headers with a combine or tractor is now easy.**

Further advantages are the front axle with full width for better driving comfort and the lower structure of the turntable, which shortens the total length of the trailer.

THE ADVANTAGES AT A GLANCE:

- > Suitable for header widths up to 18,5 m and 6.000 kg permissible total weight
- > Perfect manoeuvrability through the rear steering axle with integral hydraulic system
- > Optimal supports
- > Drawbar adjustable in height
- > Supports with angle adjustment
- > Overrunning and parking brake
- > TÜV certification and type approval up to 25 km/h (40 km/h option)
- > No hydraulic and brake lines under the frame
- > 260/70/15.3 14 ply tyres

> BISO PROFI

The BISO PROFI trailer is suitable for cutting widths up to 10,7 m. The trailer is attractive for its smooth and comfortable manoeuvrability due to the two axles with a turntable at the front. The optimal positioning of the rear axle outside the feeder house prevents collisions when loading or unloading the header.

THE ADVANTAGES AT A GLANCE:

- > Suitable for header widths up to 10,7 m and 4.500 kg permissible total weight
- > Smooth and easy manoeuvrability
- > Optimal supports
- > Supports with angle adjustment
- > Overrunning- and parking brake
- > TÜV certification and type approval up to 25 km/h (40 km/h option)
- > 260/70/15,3 14 ply tyres
- > Reinforced brake up to 5.600 kg max. permissible total weight (option)

ROBUST TURNTABLE

LEVER FOR LOCKING
THE REAR STEERING AXLE

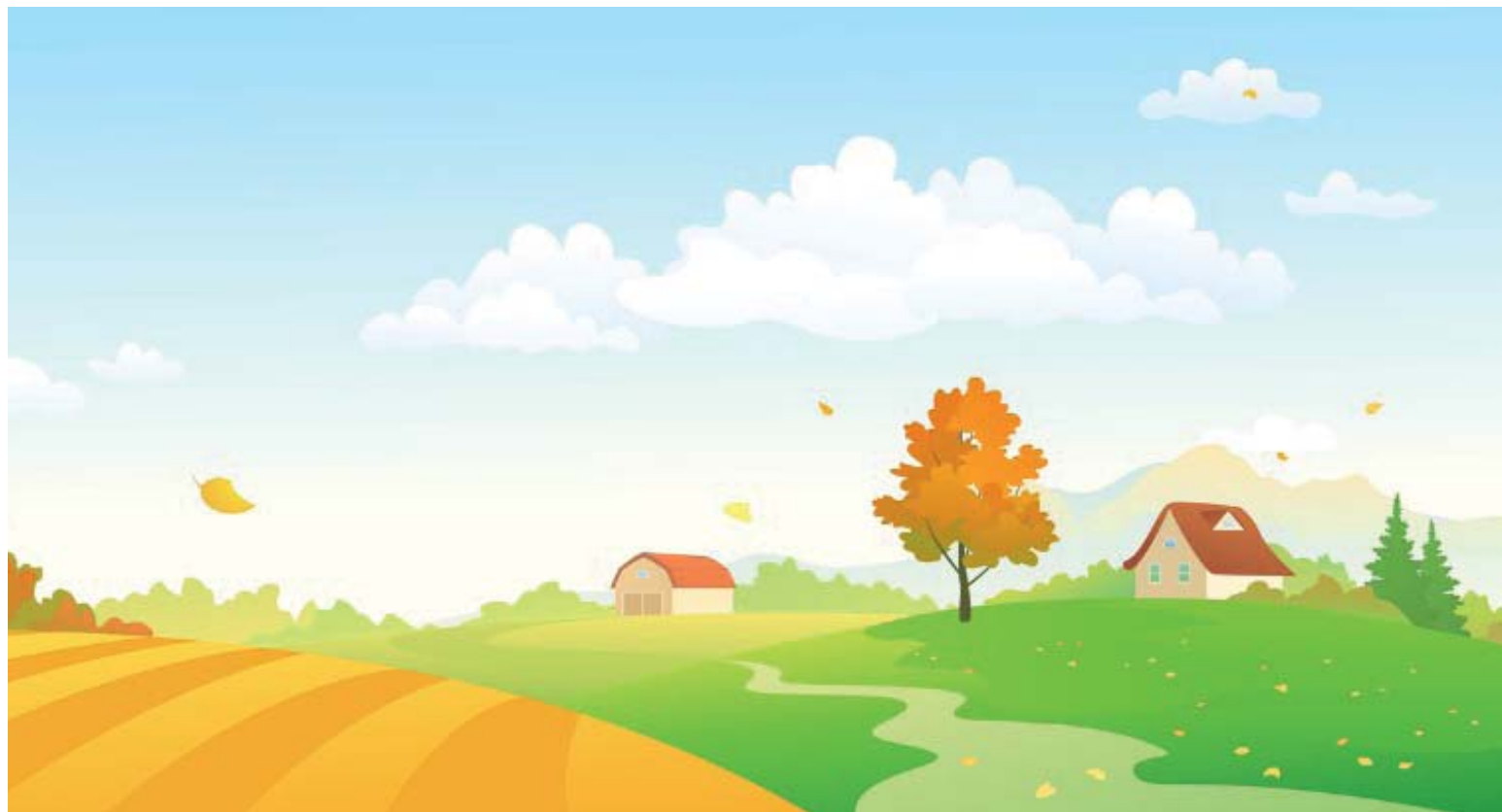
LARGE DIMENSIONED
MAIN BEAM

FRONT AXLE WITH
FULL WIDTH

LOWER STRUCTURE
OF THE TURNTABLE
shortens the total length

REAR STEERING AXLE USING
INTEGRAL HYDRAULIC SYSTEM





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