

# ZÜRN

H A R V E S T I N G



**ZÜRN PROFICUT**

The biomass direct cut header for top performances

FOR FORAGE HARVESTERS

**NEW HOLLAND FR**





## Our expertise is your strength!

We have consistently continued the development of the whole crop harvesting technology to meet the challenges of dealing with ever more powerful forage harvesters, an ever greater diversity of crops and ever newer requirements.

The new **PROFI CUT** generation sets new benchmarks in direct cutting technology for biomass. See for yourself!



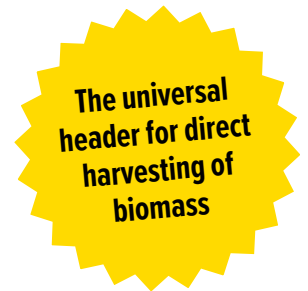


# Direct Harvesting of Energy Crops

## Cut and chop in one operation - with perfect results

Harvesting whole crops directly avoids losses and reduces harvest chain costs. Higher yields and more diverse crop rotations have changed the requirements for biomass harvest technology. We have responded by developing a completely new generation of **PROFI CUT** headers.

Offering a working width of up to seven meters, these brand-new headers are designed to deliver top results. These developments factor in customer ideas and wishes, offering maximum versatility that allows you to harvest a wide range of different crops reliably.



# DIRECT BIOMASS HARVESTING



Szarvasi grass



Alfalfa



Rya



Triticale



Vetch rye



Cup plant



Sorghum millet

## New benchmarks in biomass harvesting

### Designed for top results

The **PROFI CUT 530** and **PROFI CUT 700** direct cut headers are the perfect match for the new generation of forage harvesters and the perfect solution for the challenges of biomass harvesting.

Designed and engineered for high horsepower forage harvesters, the new wholecrop header has been exhaustively tested with the latest models from all manufacturers.

### Requiring less input power

Using optimised components and more efficient drives, we have been able to reduce the header's input power.

### Optimum chop quality

The maintenance-free disc mower impresses by virtue of its perfect cut - even in laid crop. The massive auger ensures a perfect material feed and a smooth crop flow into the forager. This is the first step in achieving optimum chop quality.



# Maximum Outputs, Maximum Reliability

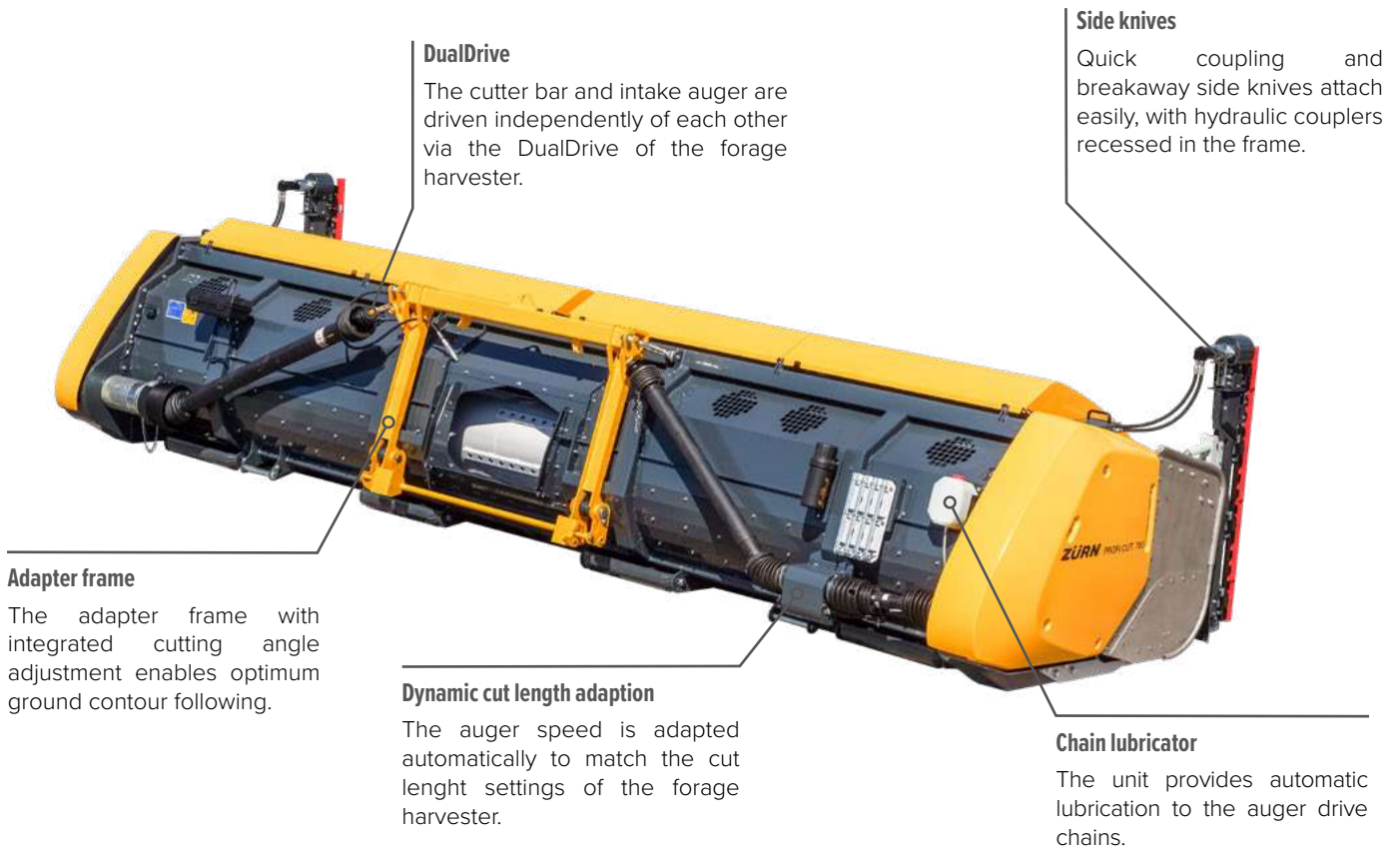
## Superior engineering for your New Holland forage harvester

Working at widths of 5.3m and 7.0m, **PROFI CUT** sets new benchmarks for efficiency and performance.

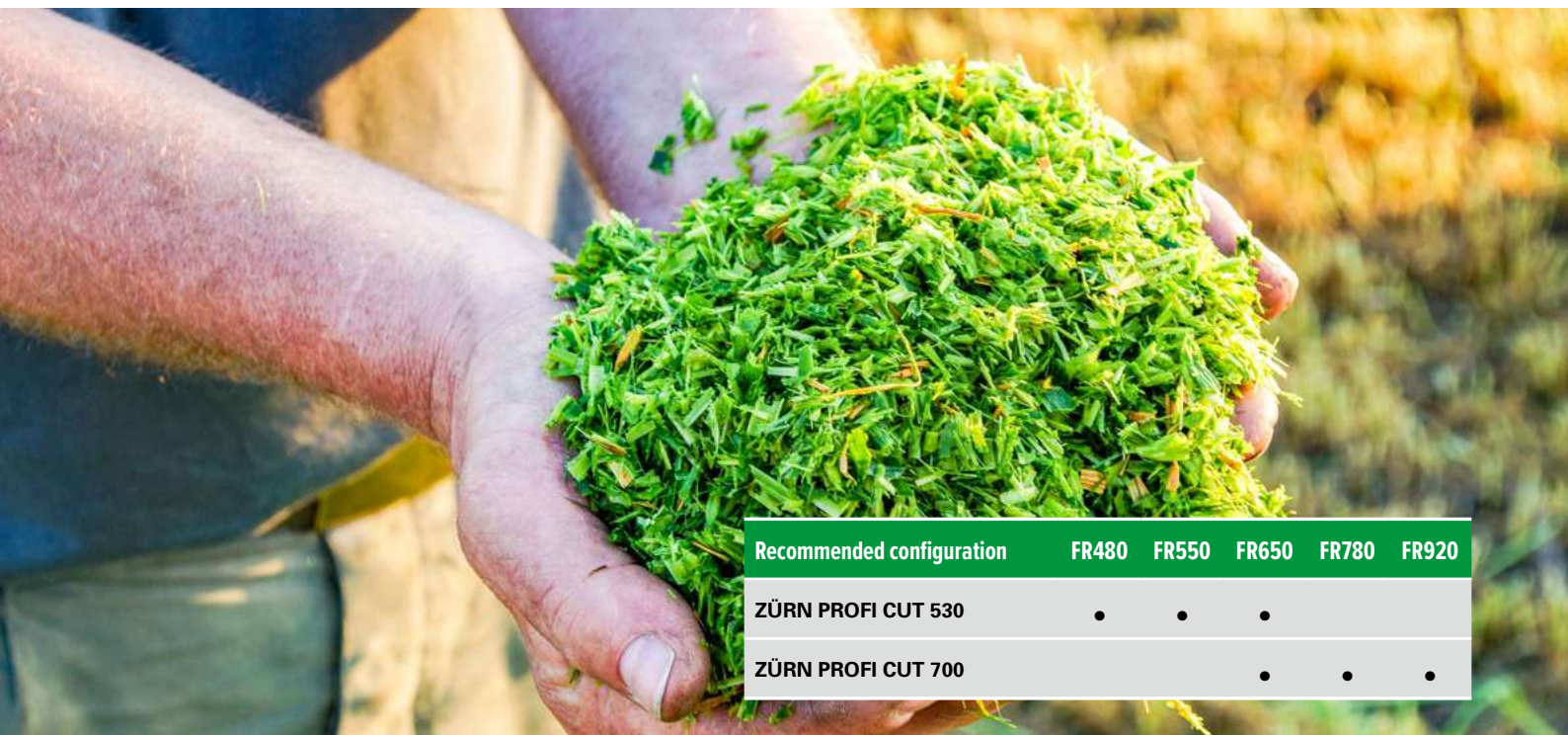


### What you want from a direct cut header:

- Harvesting biomass directly and saving the extra pass, cost-saving logistics and minimum crop contamination.
- Excellent cut, minimum mass and shatter losses; cutting close to the ground to harvest laid crop without loss.
- High acreages from a large working width and efficient use on high-end forage harvesters.
- Optimum crop flow through the header for massive throughputs and versatile use in short and high-yielding crops.
- Consistent crop feed to the pre-compression rollers for high-quality chops and minimal overlengths.
- High productivity from versatile use in diverse crops and reliable cuts in Szarvasi grass, triticale, vetch rye, cup plant and sorghum.



# NEW BENCHMARKS



Recommended configuration	FR480	FR550	FR650	FR780	FR920
ZÜRN PROFIL CUT 530	•	•	•		
ZÜRN PROFIL CUT 700			•	•	•

# The First Impression Counts

## Modern styling combined with high-quality work

The new **PROFI CUT** combines modern styling and functional engineering to deliver a powerful performance.

The stylish deck houses innovative technology, long-lasting components and a host of clever solutions for an optimum biomass harvest.

# PERFECT CONNECTION



### Adapter frame

The compact adapter frame brings the header close to the feeding rolls. With the integrated pendulum frame of the forage harvester, the header follows the ground contour perfectly.



### Cutting angle adjustment

The cutting angle adjuster adapts the header to the size of the tyres fitted or to the current harvest conditions.



### DualDrive

With the dual header drive, mower bar and auger speed can be controlled separately. This ensures a perfect cut and smooth feeding in all crops and conditions.



### Multicoupler

The multicoupler offers single point attachment of electrical and hydraulic lines. Attachment and removal has never been easier.



## “Excellent cuts and excellent chops.”

German contractor Mathias Beilharz



### German contractor Mathias Beilharz

The contracting business operates four forage harvesters that harvest approx. 2,000ha of grassland and 1,000ha of maize. **PROFI CUT** is used to chop about 450ha of whole crop silage. The machinery fleet comprises two combine harvesters and a corresponding haulage fleet.

### “Outstanding chop quality”

About 60% of Mathias’ customers are biogas producers who generally require a very specific quality of chop. The **PROFI CUT 530** has delivered just that from the very beginning:

“The **PROFI CUT** provides an exceptional cut. We have nearly no overlengths, even when we produce very short chops. This is much appreciated by our biogas customers,” says Mathias.

### “Impressive appetite”

The direct cut header makes short work of high-yielding and high-density crops. Mathias is really enthusiastic about his header: “It’s really stunning to see how much the **PROFI CUT** gobbles up. Pretty good stuff. Best of all is that the header is running quietly on the harvester.”

The **ZÜRN** direct cut header also performs superbly in cup plant: “The **PROFI CUT** is really unbeatable in cup plant,” adds Mathias.



## Very reliable and easy to service

For us, only the best is good enough. Therefore, the **PROFI CUT** uses the world's best-selling disc mower to provide perfect cuts.

Lubricated for life and designed to deliver highest outputs, the OPTI DISC <sup>elite</sup> cutter bar from KUHN brings exceptional longevity and maximum reliability and yet requires minimum service and maintenance.

Instead of using one full-width cutter bar, it has two separate and synchronised cutter bars – for high longevity and low follow-up costs.

The discs are spaced at various intervals to boost and optimise the crop flow and improve the quality of cut.



### Quick-release system for knife replacement

The quick-release knife mount system enables to exchange all knives in just a few moments.

### Cutter bar breakaway system

The breakaway system protects the cutter bar drive from damage when one of the discs hits an obstacle. A pre-machined notch on the shafts cuts the power flow and the cutter bar can be repaired within no time and at minimum cost.

### Less distance for a clean cut

At the point where the discs diverge, the distance between them is reduced to increase knife overlap. This results in a clean and stripe-free cut.

### More distance for enhanced crop flow

More space is provided in the overlap area between converging discs, which leads to a smoother crop feed to the rear and an optimum environment to produce perfect cuts.







## The Optimum Cut

### For a successful harvest

The Kuhn OPTI DISC <sup>elite</sup> cutter bar has proven its worth the world over by virtue of its top-of-the class cutting quality and superior reliability. Permanently lubricated, the mower bar requires next to no service and maintenance at all.

**PROFI CUT** produces exceptionally uniform and clean cuts - both in low-yielding and high-yielding crops, and makes short work of down crop too.

# CLEAN CUTS



#### Synchronised lateral drives on the cutter bar

The use of two lateral drives ensures a clean cut across the full working width and a smooth material flow to the intake auger. Synchronising the two cutter bars ensures reliable performance even after many hours of work.



#### Efficient cutter bar drive

The WSO pulleys increase the service life of the belts at high speeds and reduce the weight. The 4-groove Powerband is able to transmit high power.



#### Adjusting the cutting angle steplessly

The adapter frame has turnbuckles that adjust the cutting angle steplessly to achieve clean cuts in laid crops and ensure loss-free harvests.



#### Wide skids for low cuts

Four wide skids ensure perfect depth control and clean forage. They can be lined with hard-wearing Hardox plates as an option to deal with difficult conditions.



## Substrate of uniform chop lengths increases gas yields

The quality of the silage has a major impact on the level of gas yields. But the length of cut is important too. A uniform crop feed from the header is crucial for producing a substrate that is made up of uniform chops and only few overlengths.

**PROFI CUT** direct cut headers offer a number of setting options that allow operators to adjust the crop flow in varying conditions, a vital element in producing top-quality chops and boosting the productivity of your biogas plant.



### Stepless cutting angle control

for an optimum quality of work and an effective harvest of down crop.



### Adjustable wide skids

for precise depth control and minimum contamination.



### Auger speed control

for various crops and cut length settings.



### Adjustable crop deflector

for adjustment to various crops and different growth heights.



### Options

for special conditions and crops such as vetch rye and cup plant.



## Voracious Appetite

### Optimum crop feed and consistent crop flow

The cutter bar, intake auger and the driveline make a perfectly tuned system that ensures a consistent crop flow through the header.

The large-diameter intake auger feeds the material directly into the forager. The unique design of the auger flights ensures a consistent feed to the pre-compression rollers.

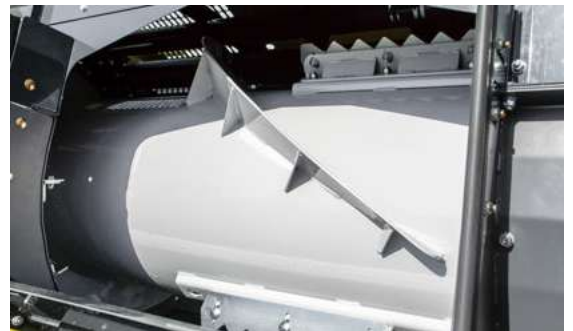
Adjusting the auger speed optimises the crop flow and the throughput and ultimately the chopping quality – especially in difficult conditions.

# SUPERIOR CHOPPING QUALITY



#### The XXL intake auger

The intake auger is geared to deliver highest feed rates. The auger measures 808mm in diameter and pivots to provide plenty of space in the trough for large volumes of material to pass through smoothly.



#### Perfect crop transfer to the forager

The conical arrangement of the flights ensures an optimum feed into the forage harvester. The paddles are adjustable so the material can be fed directly to the pre-compression rollers in particularly difficult conditions.



#### Standard wear plates

The flights are protected by bolted plates to ensure a long service life in sandy soils. The integral stainless steel floor of the auger trough optimises the crop flow even further.



#### Chop length control

The DualDrive of the forage harvester automatically adjusts the auger speed to boost throughputs and produce a uniform quality of chop. This way, the crop flow is optimised even on the header to ensure the set chop length is achieved.

# Superior Performance in Whole Crop

The high-capacity direct cut header for all types of crops

The **PROFI CUT** is a universal header that delivers perfect cuts in the direct harvest of biomass. The direct cut header is designed to manage huge masses of crop, no matter whether you are harvesting whole crop silage, vetch rye or cup plant.

Its massive working width ensures the most powerful forage harvesters are supplied with volumes that suit their appetites. Yet also in low-yielding crops, **PROFI CUT** delivers tidy cuts at working speeds of up to 20kph.

## UNRIVALLED VERSATILITY



### Hydraulic side knives

The side knives are the perfect option for dealing with difficult and tangled energy crops. The knives are protected from impact and potential damage by springs that allow them to break back and return to work position.



### Integral hydraulic couplers

The hydraulic lines for the side knives are integrated in the header and the couplers are recessed for protection from chaff and debris.



### Height adjustable crop deflector

The crop deflector can be hydraulically adjusted to the crop height. This ensures that short and tall crops are always perfectly fed - and loss of grains is prevented effectively.



### Automatic chain lubricator

The automatic chain lubricator attends to the chain systematically and accurately, reducing wear and service time and boosting machine reliability.



## Clever solutions for all crops and harvest conditions

### Universal options

A range of options are available to adapt the **PROFI CUT** direct cut header to various crops and varying conditions.

For example, the crop deflector is height adjustable to suit different growth heights. This is done hydraulically by pressing a button in the cab. This feature allows machine owners to harvest crops up to 4m tall.

### Side knives and cup plant kit

The side knives convert the **PROFI CUT** in no time into a header that cuts tangled crops such as vetch rye.

The special cup plant kit is available for the harvesting of perennial cup plant. The crop roller ensures the plants flow smoothly into the header, and special spikes on the auger provide an effective feed.



### Cup plant (*Silphium perfoliatum*)

The cup plant with its showy yellow flowers is of increasing importance as energy crop. The permanent crop can complement maize cropping rotation with an enormous biomass potential. This makes the cup plant the supreme discipline of whole crop harvest.



### Tuned for challenging cup plants

The new **PROFI CUT** has proven its versatility in extensive field tests with various crops and conditions. It's made for highest throughputs and feeds the bulky cup plants evenly.

# Easy Loading and Fast Transport

## The header transporter for direct cut headers

Our header transporter benefits from a thorough re-engineering for swift field changes. The transporter lowers its bed hydraulically so the operator can conveniently place the header on it. This feature is a major plus in speeding up attachments and removals.

Equipped with a hydraulic-steer rear axle, the transporter tracks behind the forage harvester for safe travel on narrow field tracks and through narrow gates - the ideal way of getting **PROFI CUT** to the field fast.

# CONVENIENT TRANSPORT



### Hydraulic lower/raise

The bed of the transporter is lowered hydraulically for convenient attachment and removal of the header in the field. After the header is placed on the bed, this is raised for generous ground clearance and safe travel on bumpy field roads.



### Swift and safe travel

Forage harvesters usually travel at high speed between fields to save valuable time. Consequently, all our header transporters have been homologated for road speeds of up to 40kph as standard specification.



### Mechanical locking system

Thanks to the new supports and the mechanical header locking system, **PROFI CUT** is secured quickly and easily on the header transporter.



### Storing the side knives on the transporter

When the side knives are not in use they are stored in practical brackets on the transporter. Their quick couplers allow for attachment and removal in record time without the use of tools.

# Technical Details

## ZÜRN PROFI CUT for NEW HOLLAND FR Forage Cruiser

Model no.	PROFI CUT 530	PROFI CUT 700
Description	Direct cut header for harvesting whole crop silage and biomass with the self-propelled forage harvesters New Holland FR Forage Cruiser	
Working width	5.3 m (17.5 ft)	7.0 m (23 ft)
Working speed	5 - 20 kph	5 - 20 kph
Cutting height	5 - 15 cm	5 - 15 cm
No. of mower discs	2 x 6	2 x 8
No. of knives	24 (2/disc)	32 (2/disc)
Cutter bar drive	Synchronised lateral drives, 4-groove Powerband, WSO pulley	
Intake auger diameter	808 mm	808 mm
Intake auger	Bolted wear plates on the auger flights, adjustable infeed paddles	
Auger drive	Chain drive, dynamic auger speed via the DualDrive of the SPFH	
Autom. chain lubricator	●	●
Input power	45 kW (61 hp)	55 kW (75 hp)
Adapter frame	Adapter frame with cutting angle adjustment, central pivot pin (pendulum frame on the forager);	
Multicoupler	●	●
No. of wide skids	4	4
Set of Hardox skid plates	○	○
Hydr. side knives	○	○
Side knives drive	Oil supply via separate hydraulic system	
Cup plant kit	○	○
Hour counter	○	○
US lighting	○	○
Weight	2,960 kg	3,250 kg

Model no.	SWW 660-530H	SWW 660-700HL	
Description	2-axle header transporter with articulated steering and hydraulic bed lift/lower for ZÜRN PROFI CUT direct cut headers.		
Recommended for headers	PROFI CUT 530	PROFI CUT 700	
Hydraulic lower/raise	●	●	
Four-wheel steering	–	●	
Dimensions	Length	10,357 mm	11,995 mm
	Width	2,430 mm	2,430 mm
Weight		1,800 kg	2,100 kg
Gross weight		6,800 kg	6,800 kg
Tire size	10.0/75-15.3 14 PR		
Number of supports	2	2	
Supports with mechanical locks	●	●	
Parking brake	●	●	
Overrun brake with auto reverse	●	●	
Lighting	●	●	
Type-approval	Approved for 40 kph		

● Standard ○ Option – not available

# 135 Years of Passion for Ag Machinery

Our complete product range



## The harvest specialist

We are firmly rooted in farming and at home in the fields around the world. The origins of **ZÜRN** date back to the blacksmith shop that was founded in 1885. Since then, **ZÜRN** has evolved to become a synonym for 100% Made in Germany quality.

At our Merchingen production site, we develop and manufacture equipment for combines and forage harvesters of all brands. New technologies for mechanical weed control complete our extensive product range.

Our Hohebuch production site develops, manufactures and markets research plot combines that ensure plot-to-plot purity.

State-of-the-art production technology and service expertise ensure high-performance and reliable products that boost your productivity.

### Combine headers

- ▶ **PREMIUM FLOW** high-capacity belt headers
- ▶ **SOLERO** sunflower headers

### Header extensions

- ▶ **RAPSPROFI II** rapeseed header extensions
- ▶ **COMPACT** side knives
- ▶ Sunflower extensions

### Header transporters

- ▶ Single-, tandem-, two-axle header transporters
- ▶ Four-wheel steer header transporters

### Headers for forage harvesters

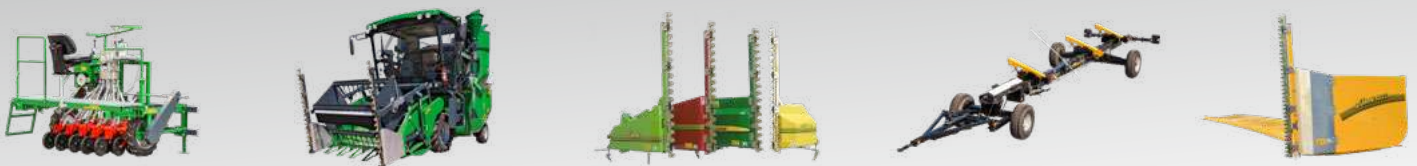
- ▶ **PROFI CUT** direct cut headers for biomass

### Econventional Farming

- ▶ **TOP CUT** <sup>collect</sup> weed collector
- ▶ **SEED TERMINATOR** multi-stage hammer mill

### Agricultural field trial equipment

- ▶ Plot combines
- ▶ High-clearance tool carriers
- ▶ Plot seeders



## Zürn Harvesting GmbH & Co KG

Kapellenstr. 1 · 74214 Schöntal-Westernhausen · Germany

Tel.: +49 (0) 7943 9105-0 · Fax: +49 (0) 7943 9105-33

info@zuern.de · www.zuern.de

This brochure is available internationally. Some illustrations and texts may refer to optional equipment and accessories that are not available in all regions. Further information is available from your local dealer. Zürn Harvesting reserves the right to change specifications and designs shown in this brochure without notice.

EN | PROFICUT CNH | 2/2022

# ZÜRN

H A R V E S T I N G

