

ZP4-OS

4-ROW SELF-PROPELLED

**BRUSSELS-SPROUTS
HARVESTER WITH HOPPER
AND OPTICAL SORT**



DEMAN
AGRO

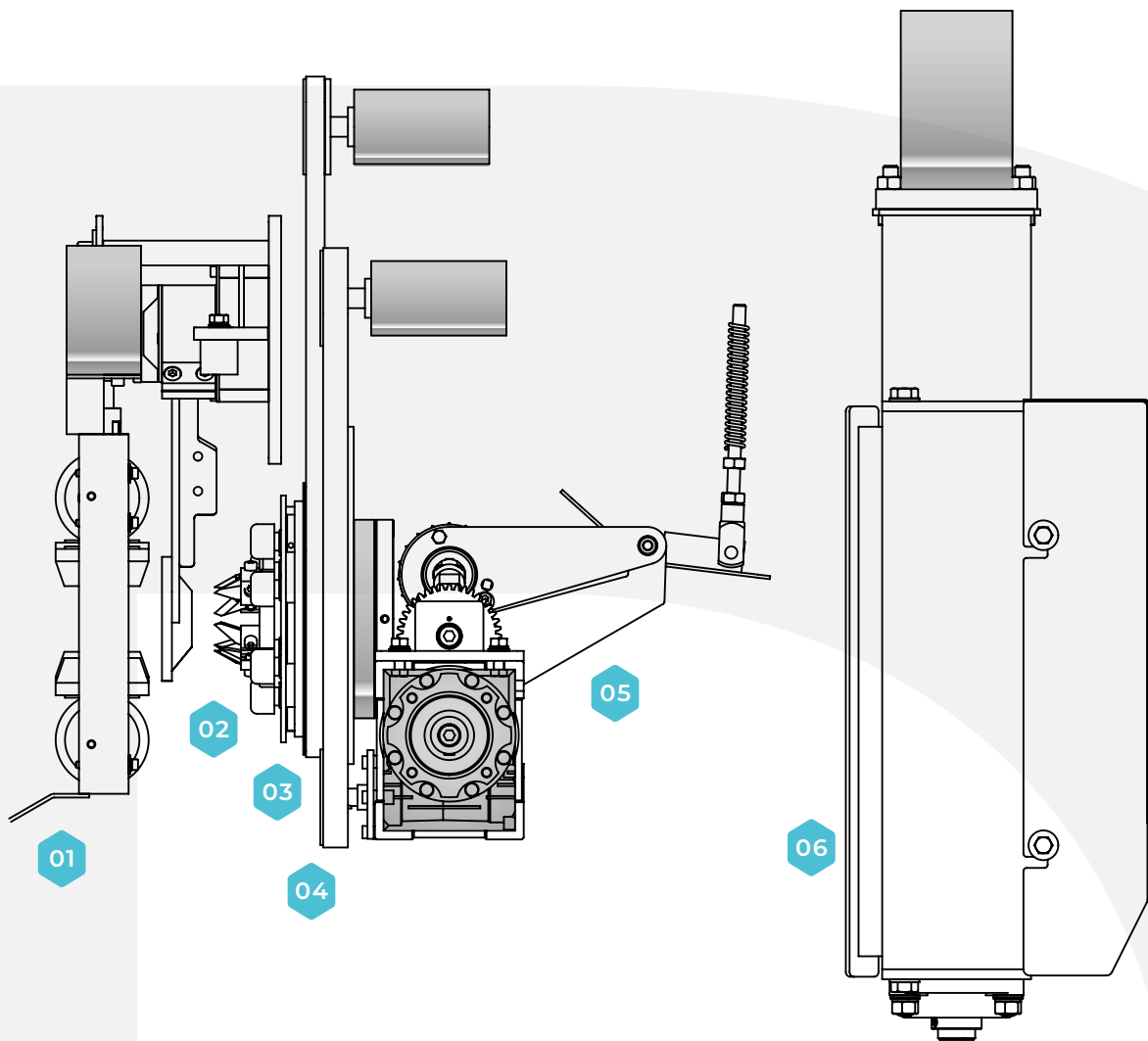
DEMAN HARVESTERS,
**OUTSTANDING
PERFORMANCES AND
QUALITY YOU CAN RELY ON**

A Deman machine owner is characterized by dedication and determination. A hard worker, reliable and proud of his profession. A vision that aligns perfectly with our philosophy and our products. Trustworthy, economical and high-performing machines that harvest crops in a swift yet gentle manner, providing a new dimension to your harvesting process.



**WE'VE GOT
YOUR BACK**





OBTAINING A BETTER CUT

All components of the Deman plucking system are developed and produced in-house with one goal in mind: providing the best picking results in every condition. Each component has been studied in detail to obtain an extremely reliable system. Standardized components are carefully selected and are available worldwide.



01. EJECT ROLLERS

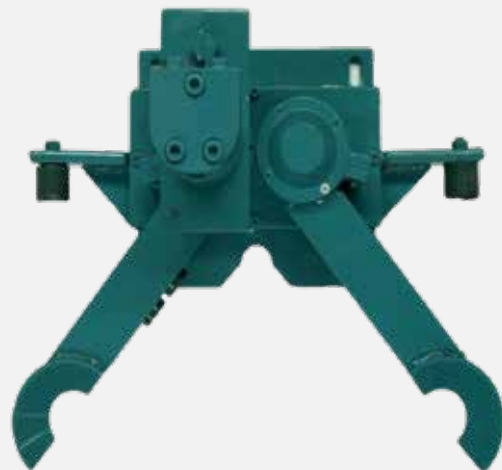
The clipped leaves are removed from the picking unit by the rotating eject rollers. The picking unit is free of leaves at all times, providing a faster harvest when a new plant is brought in.

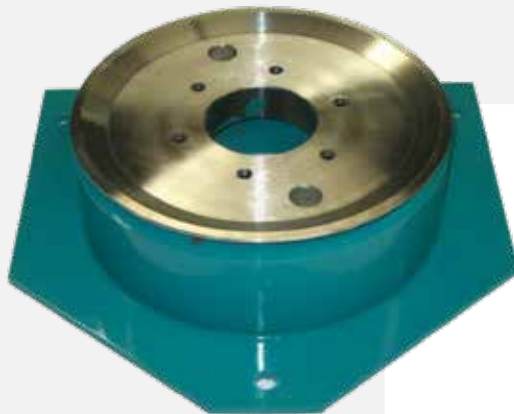
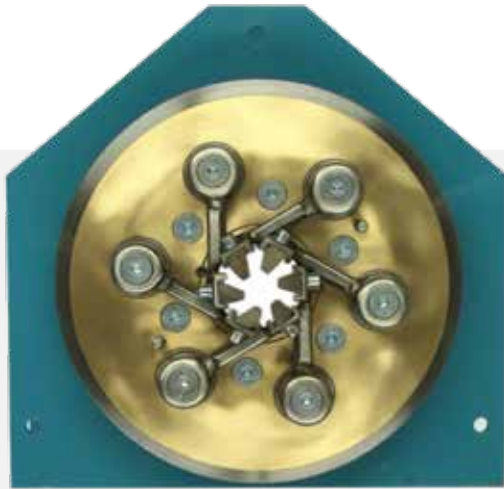
Improved operation

The rollers run at low speed in wait mode. After a predetermined period, the rollers resume to run at full speed. Shock inducing loads on the casing are kept to a minimum. The frame is made of stainless steel, ensuring food safety.

02. CENTRING MECHANISM

The centring mechanism enables easy and fast picking. Sprouts can be picked quickly as the stem is automatically centred between the blades. A simple and robust construction that is maintenance-free.





03 & 04. PICKING HEAD AND HEADPLATE

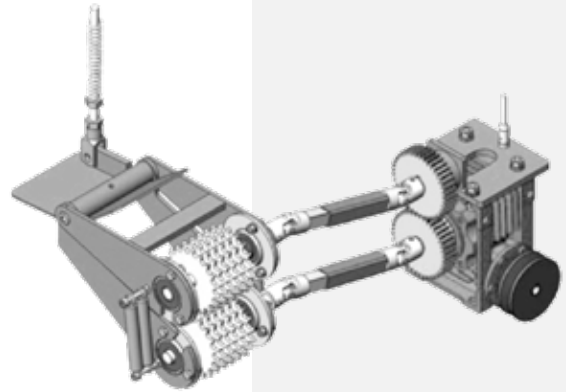
All components are made from exceptional steel and are constructed with the utmost precision on CAD-controlled machines. The blades are made from specialised Cr Mo V-steel and are hardened and sharpened on specialised machines.

The sprouts are cut with hydraulically controlled picking pressure which can be increased or decreased towards the top of the stem. Various types of cutting blades can be mounted on the picking head.

Two large main bearings ensure a steady picking head. This results in a low-maintenance and a long-life picking unit.

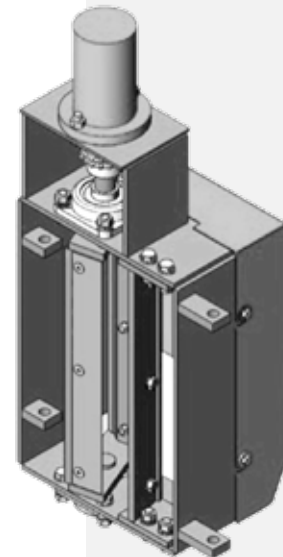
05. INTAKE ROLLERS

The intake rollers are mounted on a pivot and are held in position by an adjustable spring. The two rollers are held with strong springs, ensuring that the stem is firmly centred in the picking head.



06. CHOPPER

A strong and robust chopper cuts the stem into small pieces. The clipped pieces are removed from the machine and remain on the field as natural fertilizer.



07. SAWING UNIT WITH ALIGNMENT SETTING

The sawing units are suspended on a steel cable and can move simultaneously to the left or to the right. In this alignment setting, the distance from the sawing unit to the edge of the cabin is adjustable, in case sprouts have fallen to a particular side.

08. LARGE CABIN

The cabin of the harvester offers every conceivable comfort to enable you to cope with long harvesting days. The bright 220 ACV lights allow you to maintain focus and keep productivity at a high level.

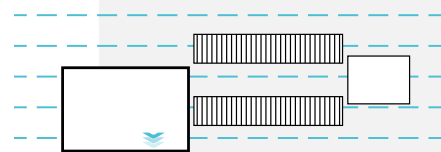
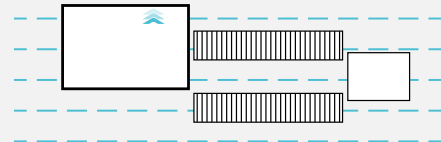
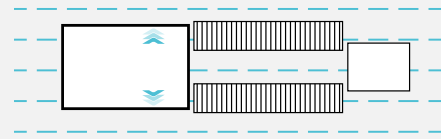


09. ELECTRONIC PICKING SETTINGS

The PLC provides comprehensive settings that can be monitored on an LCD screen, providing accurate data that can be retrieved at any time. Closing the knives, opening the centring mechanisms, turning the ejector rollers and starting the second picking pressure can be fine-tuned. Subtle adjustments result in rapid harvesting. The machine determines where and how the sprouts are cut, ensuring a clean and efficient harvest.

10. CABINE WITH SIDE SHIFT

The entire cabin is installed on four large steel wheels with sliding bearings. This allows you to drive as close as possible to the sprout plants. Damage to the sprouts and mud accumulation is minimised. DEMAN has reinvented the side-shift principle and made it extremely compact.



11. USE OF SIEVES

A sieve is installed on the first conveyor to remove the small leaves from the sprouts. A simple and effective solution that processes the sprouts in a gentle manner.



12. TWIN TURBINE TECHNOLOGY

Two turbines remove all of the clipped leaves before the sprouts are transported to the bunker. The compact and effective design guarantees efficient suction power. The first and largest turbine sucks out the leaves from the first conveyor. The second smaller fan removes the remaining leaves. The leaves are blown towards the ground, ensuring that the products are not contaminated with the juice of the pulverised leaves.





13. PRESORT MODULE

A PVC roller chain can be fitted to remove the largest objects, ensuring that the right size of Brussels sprouts is stored in the machine's bunker. Sprouts with the right size fall through the rollers, oversized sprouts stay on the rollers and are transported away, resulting in less waste in the bunker and more storage capacity. Excess objects remain on the field.



14. OPTICAL SORT MODULE

The Deman OPTISORT Colour Module is an optical pre-sorting unit. This ingenious system recognizes and removes bad or rotten sprouts and sprouts that have black spots. The OPTISORT operates with an algorithm that compares the sprouts with thousands of pre-loaded images. This enables the machine to process different types of sprouts. As no two sprouts are similar, the machine has to be capable to recognize every kind of sprout that passes the colour sensors. The difference between fresh green sprouts, wet and shiny or dark green frozen sprouts is easily detected by the Deman OPTISORT module.





15. SELF-LEVELLING

The optical sorter must be level at all times to ensure an efficient trajectory of the sprouts. For this reason, Deman fitted two elements on a combined chassis that can move in both directions. An electronic inclination sensor and two hydraulic cylinders ensure that the chassis is always level, regardless of the shape of the field. The chassis is mounted on a pivoting support that can handle fields with an inclination up to 7°.



Levelling Optisort +7° / -7°



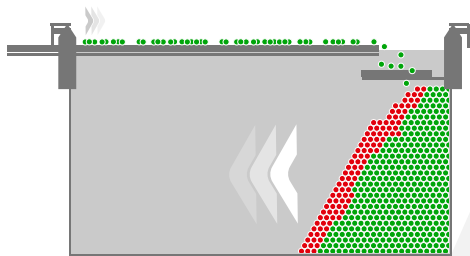
Easy access

16. THE NEW UNLOADING BUNKER

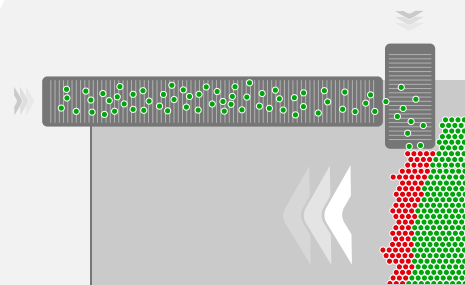
The sprouts are transported by the longitudinal conveyor belt and are gently deposited onto the transversal conveyor belt. When the machine starts up with an empty bunker, the transversal conveyor belt is located at the back of the bunker. It remains in place until the bunker is filled to the top, this is measured electronically. When the bunker is full, the transversal conveyor belt moves towards the cabin of the machine, resulting in a continuous filling of the machine

by gently dropping the products. Height is reduced, ensuring the preservation and the quality of the sprouts. A major advantage of this method is the weight distribution of the machine. In very wet conditions, the machine does not dig itself into the mud.

The bunker is unloaded by two electronically controlled conveyor belts that can be activated independently.



Start-up of the machine with an empty bunker. The bunker will continue to fill up until the top is reached.

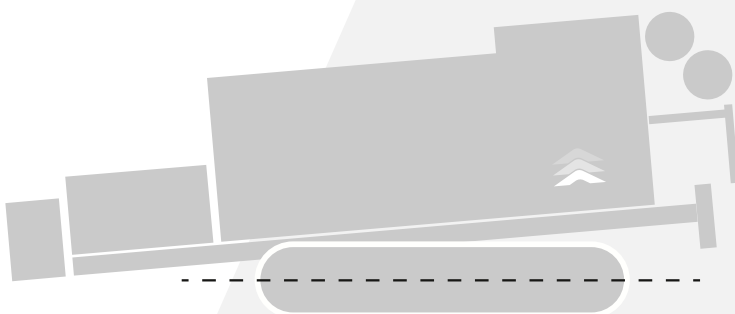


Transversal conveyor belt steadily moves towards the cabin of the machine when the harvested sprouts reach the top of the bunker.

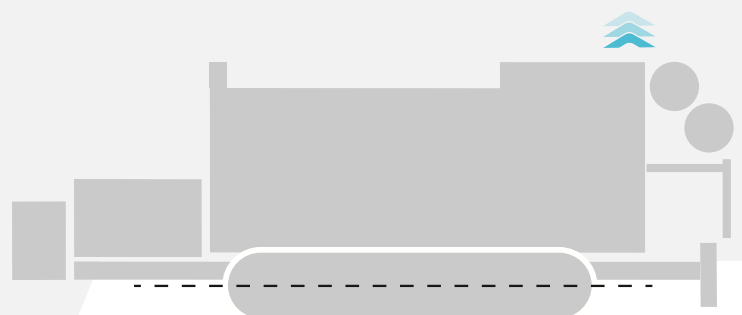
17. MAST DESIGNED CABIN

The newly designed mast cabin keeps the chassis level under any circumstance. When the caterpillar tracks sink into wet ground, the conventional design pushes the cabin up and the engine compartment down, resulting in an

engine compartment that is situated near the surface in very wet conditions. The new mast design keeps the machine level at all times. When the caterpillar tracks sink, the mast raises the cabin, keeping the system level and ensuring maximum clearance below the engine.



Conventional design



Mast design

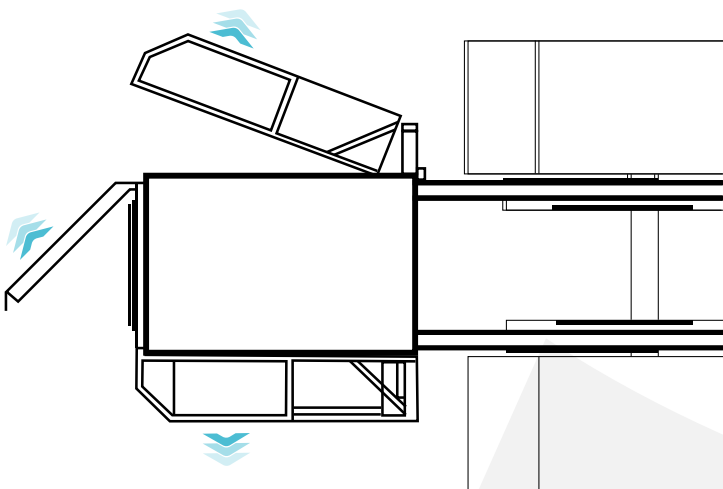
18. FPT INDUSTRIAL

FPT Industrial is the branch of CNH Industrial that focuses on the development, production and sale of powertrains for On-Road, Off-Road, Marine and Power Generation applications. The company employs 8,400 people worldwide across 10 plants and 6 Research & Development centres. A commercial network of 93 dealers and nearly 900 service points ensure FPT Industrial's presence in more than 100 countries. One of the many reasons why we chose FPT Industrial as our partner.



19. MAXIMUM ACCESSIBILITY

The engine and hydraulic compartment are designed for maximum accessibility, providing easy access when engine maintenance is required.



20. TELEMATICS

The Deman telematics system, linked to the sprout pickers' PLC, collects data and stores it in the cloud.

This data can be consulted via Capture, a convenient and user-friendly framework that you can log into online.

This way, users can remotely check the various parameters and performance of their machine.

This has many advantages. For instance, as a user you can select a period during which you get information on:

- where the machine has driven
- how much was harvested
- what the fuel consumption was
- when the machine has been stationary and for how long

Contacting workers or going on site is no longer necessary, as actual data can also be checked in real time.

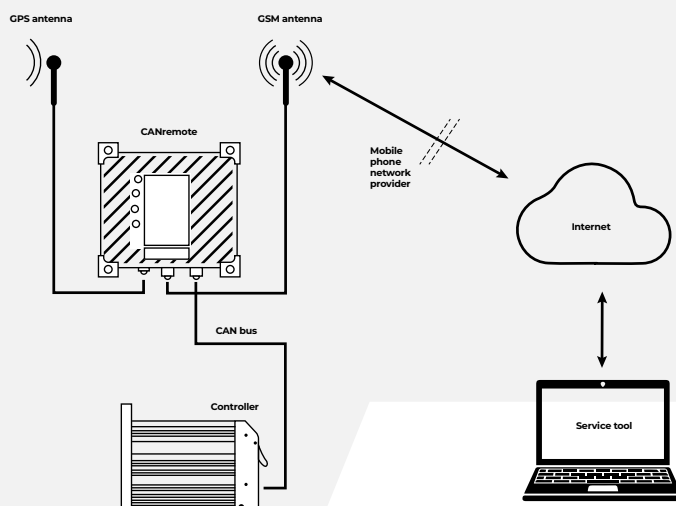
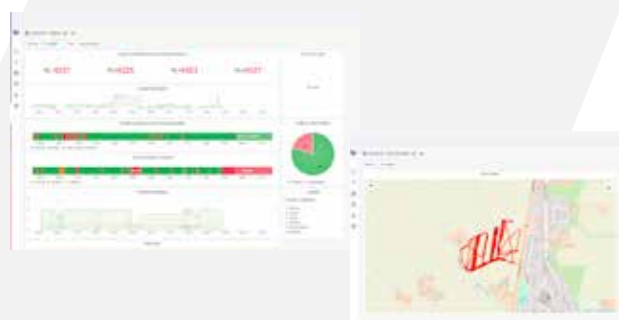
Among other things, you can check:

- the machine's location (via Google maps)
- what the machine is currently doing
- at what speed the diesel engine is running
- how full the bunker is
- what the current fuel consumption is
- how much diesel is available



An additional advantage is that we can check the various sensors remotely, so any malfunctions can quickly be detected and remedied.

This way, if a problem should occur in the field, a diagnosis is quickly made and any necessary action can be taken swiftly.



STANDARD CONFIGURATION
Eject rollers
Centering mechanism
Storage for personal material
Radio with Bluetooth
Digital dashboard
Centralised HMI for operations and visualisation
Undercarriage S30-30 - 54 plates for undercarriage width 900 mm (= 3.5m long bunker) - Bosch hydromatic-Transmetal Bonfiglioli-Berco chains
Undercarriage S30-30 - 57 plates for undercarriage width 900mm (= 4m long bunker) - Bosch hydromatic-Transmetal Bonfiglioli-Berco chains
Camera with 3 channels
FPT diesel engine N45 STAGE V, 125kw at 2200 rpm
Cabin heating 5DL Airtronic
Length: 10065 mm (3,5m bunker) - 10565mm (4m bunker)
Width: 3450 mm
Height: 3420 mm
Weight empty: aprox. 24000 kg (45896 lb)
Bunker volume: 17m ³ (1037391 cu in)
Row distance between Brussels-sprouts 700 mm (27.6")- 750 mm (29.5")
Diesel tank capacity: 950l
Twin Turbine Technology
Centralised greasing system that is controlled by HMI

OPTIONAL
Unloading conveyor belt on bunker
Undercarriage with oil lubricated chains instead of greased chains.
Row distance between Brussels-sprouts 600mm (23.6")-650 mm (25.6")
Fuel pump 24VDC for transferring fuel



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