



R Concept


PANTHER

ROPA
Superior class.



- ✓ practice-oriented and innovative
- ✓ harvesting the entire beet crop
- ✓ excellent reliability – sturdy construction
- ✓ **long lasting and of stable value**



Professional machines of superior class.

- ✓ new chassis - more operational safety in wet conditions
- ✓ levelling on slopes and higher driving comfort
- ✓ new cabin of easier operation
- ✓ large tank capacity – high daily performance
- ✓ reduced fuel consumption
- ✓ less wear and tear
- ✓ **more soil protective**



ROPA



Anti Shake and Balance System

Hydraulic wheel load compensation system with fully automatic slope levelling

- ✓ 2 swing axles with 4 stabilization cylinders
- ✓ 50 % less rolling motion on the chassis and steering sensor -> exact row guidance, less damaged beet
- ✓ lower material wear, extended useful life
- ✓ hydraulic connection of the stabilization cylinders from the each side
- ✓ compensation of wheel load between front and rear axles -> better traction and soil protection
- ✓ more slope stability, less risk of tipping over
- ✓ better lifting depth control, less soil pickup
- ✓ large-sized Michelin Ultraflex tyres with only 2 bar pressure
- ✓ better driving comfort even on the oblique descents and headlands

On a side slope the chassis can be inclined more than 7 percent to the slope.

ROPA

Anti Shake and Balance System

Uneven surfaces (e.g. when driving along a furrow) are transmitted only half to the frame thanks to roll stabilization of the chassis!



Optimal surface contour adaptation by means of two swing axles with stabilization cylinders - cabin, bunker and chassis remain in horizontal position.

Hydraulic wheel load compensation system with computer-controlled slope level adaptation

For sugar beet harvester by type ROPA Panther has developed a new chassis design with 2 swing axles in connection with 4 stabilization cylinders. **Compared with the**

previous chassis of the 2-axle sugar beet harvester, this reduces the sway of machine by 50 percent. It is caused by hydraulic connection of stabilization cylin-

ders at the front and rear axles of the one side, so that the ground unevenness at the wheel in level difference affects the frame only to 50 percent. Thanks to the reduction



of the chassis swing, the row and depth control is improved simultaneously, as the frame is averaged to the position of the both axles.



Stabilization cylinder



ROPA Panther is a technically perfect two-axle harvester

New ROPA Panther is a two-axle sugar beet harvester, developed with visionary concept. Numerous new developments of ROPA Panther have resulted in a better yield

and higher daily performance by efficient and soil-protective sugar beet harvesting. Well-proven features and detailed solutions are combined in new Panther together

with the latest technical innovations from company ROPA. „Extremely huge paws“, automatic wheel load and slope compensation with roll stabilization, **super long un-**



loading elevator, automatic folding for fast changeover from road to field mode are only few of numerous innovations. The new intuitive operation concept R-

Concept in the newly designed R-Cab sets new standards for self-propelled harvesting technic.



PIS – integral defoliator

PIS - ROPA integral defoliator, standard model for normal harvesting conditions

Leaves are mulched with robust defoliator's knives from the beet crowns and spread between the rows. Therefore, beet leaves with all their nutrients are evenly delivered to the soil -> an optimal condition

for further soil cultivation as green waste transforms fast into humus. The rotor rpm can be conveniently adjusted, from the cabin from rough to fine structured mass. Similarly, the all-round defoliator

(pictured above, right) can be switched to integral approach, so that the beet field can be lifted up without "opening up the field", working off one end.



PAS – all-round defoliator
Integral leaf-layer



PIS – integral defoliator



PAS – leaf ejection

PAS - ROPA all-round defoliator with 380 mm leaf auger and large leaf-spreader
(can be changed from the cabin for either integral topping or leaf ejection)

With the **ROPA all-round defoliator** you are ready for all requirements. Optionally, the shredded beet leaves are placed between

the rows or spread by leaf auger/leaf-spreader over the lifted area. You can easily switch by pressing a button in the cabin. To harvest

the beet leaves (for biogas or dairy) an optional leaf conveyor can be attached.



PAS - integral leaf-layer

To harvest the whole beet



ROPA has further developed the sugar beet leaves cleaning.



ROPA defoliator PES is an alternative

The newly developed defoliator with rubber flails from ROPA has independently hydraulic driven flails which allow individual rotor speed control - unique system! Each rotor shaft can be adjusted

crowns!



to well-proved and cost effective Micro-Topper

at the height independently from the other. As a result, the operator can react quickly and effectively to different requirements due to changing beet crops. Various settings can be stored and

accessed on the joystick using a memory function.



Micro-Topper

...certainly more yield!



The topping shaft is led so high, that the leaf cuttings are remained on the beet.

ROPA Micro-Topper - maximum revenue with no additional effort

ROPA Micro-Topper is the best practical solution that simultaneously meets the requirements of farmers, contractors and sugar mills! ROPA Micro-Topper provides

the ability to harvest the whole beet heads without tops. At reduced rounds per minute the topper is lifted so high that each beet head is remained with the leaf cuttings.

Thus, the useful life of defoliator cutter is increased (less contact with the ground /stones), while reducing the fuel consumption. The comb of the Micro-Topper fol-

Harvest the whole crowns!

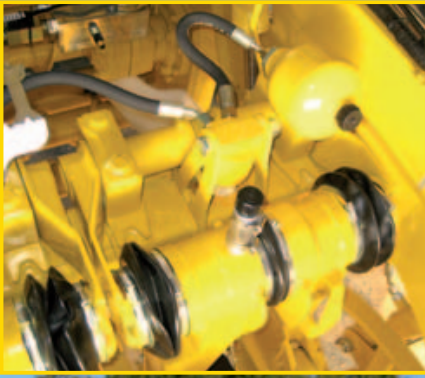
ROPA's Micro-Topper increases your yields.



The comb of Micro-Topper detects the height of each beet crown and "shaves off" the leaves.

lowers each beet head, adjusting the trimming gap to the size of the head, so that the beet is cut not too much and returns maximum yield. The intensity of the cut can

be easily adjusted from the cabin. You may choose between topping and "shaving off" leaves only (micro-topping).



Hydraulic stone protection, positioned on top, maintenance-free linear guide



Faster oscillating share drive with axial-piston motor and spur gear, adjustable taper roller bearings.



Depth control wheels with variable row width of 45/50 cm, adjustable with a button push from the cabin

Non-jamming PR lifting unit with hydraulic stone protection

The PRh lifting unit is equipped with counter-rotating oscillating shares and maintenance-free **stone protection**.

Lifting units are supplied with 45 cm and 50 cm. The variable lifting unit

can be easily switched from 45 cm to 50 cm from the cabin. The 900 mm large depth wheels combined with the intelligent three-point suspension guarantee accurate depth control of the lifter. Minimum maintenance

costs are required thanks to adjustable taper roller bearing in drives and oscillating share drive.

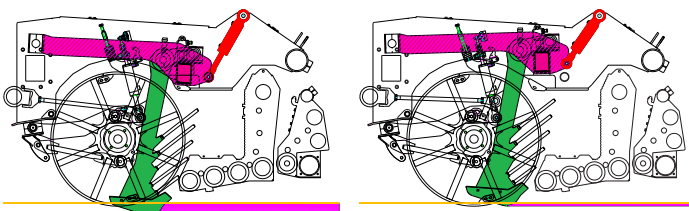


ROPA lifting share angle and distance are optimally adjustable to six positions for more careful beet treatment.

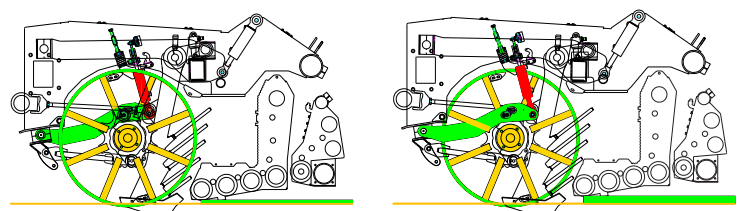


Excellent view across the lifting unit -> the operator watches the beet row and the operation of the Micro-topper

Hydraulic height adjustment of the share bar



Hydraulic height adjustment of the lifting rollers







ROPA

A dexterous Panther

- ✓ TOP maneuverability with 60° articulation angle
- ✓ optimal articulation position - 1650 mm behind the front axle
- ✓ by faster driving along curves the chassis incline to the center of the circle
- ✓ easy harvesting, also on small fields
- ✓ small turning radius







Yield indicator thanks to ultra-sound sensors and tank level measurement system



Beet tank capacity 28 m³ - flexible and efficient soil protection

The ROPA Panther offers about 28 m³ of storage capacity. The auger ensures even distribution of sugar beet in the tank.

The axle loads stay always even

low. The **tank fill level** is shown on the colour terminal. It's a valuable help to the operator, as when e.g. the display shows a load of < 50% he immediately knows that the tank

has sufficient capacity left to take in the beet on the way back. The **step-less hydraulically driven longitudinal and cross conveyors** are fitted with solid pin chains and



✓ 1000 mm wide elevator

- longitudinal tank conveyors are made bias to cross tank conveyors
- 1000 mm wide elevator with double drive
- tank deck can be replaced by segments

sprung steel slats. High quality materials extend the conveyors' useful life and, therefore, the profitability of the machine.









Tank operation panel

A button touch is enough to switch on the automatic unloading of the whole tank volume of 28 m³ in less than 50 sec. Additional operator's ease is the memory function for two unloading heights.



Extremely long unloading conveyor – faster tank unloading

The newly designed large unloading elevator is located between the front and rear axles, directly after the articulation. Due to space constraints we built the unloading elevator to fold three times. The unloading elevator is 1400 mm (4.7 ft) wide which makes it

easy to build 10 meter (32 ft) wide piles alongside the road or overload to a 4 m high trailer. The belt with 150 mm long fingers guarantees high feeding capacity at short unloading less than 50 sec. The unloading speed can be set stepless, which allows overloading

to a trailer driven alongside. Two different automatic heights can be saved for easy overloading or unloading.





The highest efficiency of traction drive.

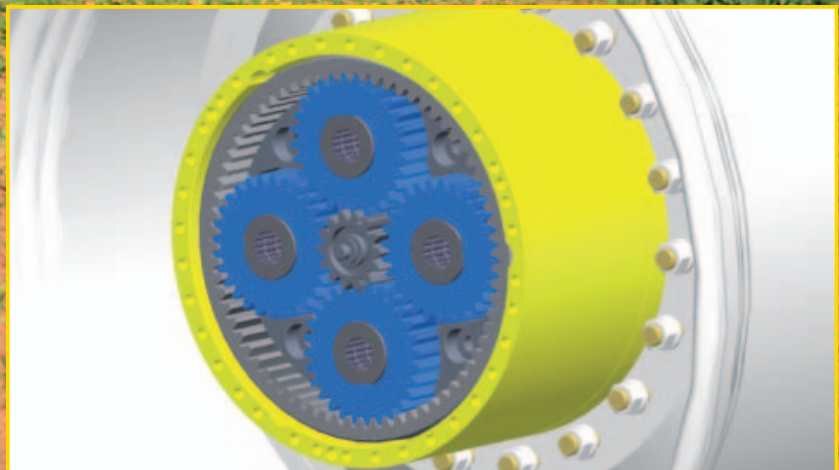
A sophisticated drive concept to ensure machine's long useful life

The power transfer in 530 hp / 390 kW (Mercedes Benz 6-cylinder row engine) strong ROPA Panther provides improved fuel economy and further soil protection. The engine

has EURO MOT 4 exhaust gas level without a particle filter thanks to an SCR catalytic converter. A higher maximum torque of 2450 Nm is efficiently transmitted to both

axles via a new Rexroth hydraulic pump. Large gear-planets transfer high torque to the large wheels. Harvesting speed is up to 15 km/h, on

Power meets efficiency



The planet gears with 4 drive wheels correspond to the tyre diameter.

roads it reaches 32 km/h, both fuel saving due to low engine speed.



R Concept





B Touch 09:10 07.28.2013

5.9 1105 1300

28.2 V 7.3 bar
83 C° 420 bar
43 C° 163 oil
104 % 19 %

10° 7.4°

path 106.8
power 100.0
ha 23.748

B Select

MAX STOP

120 112 180 109

8 4 12 10 127 15 0 0 bar 12 19 4 3 12 1 2



B Transfer
Wi-Fi Connect



Direct

100 100.0

100.0

100.0

ROPA

TEACHIN

100 100.0

100.0

100.0



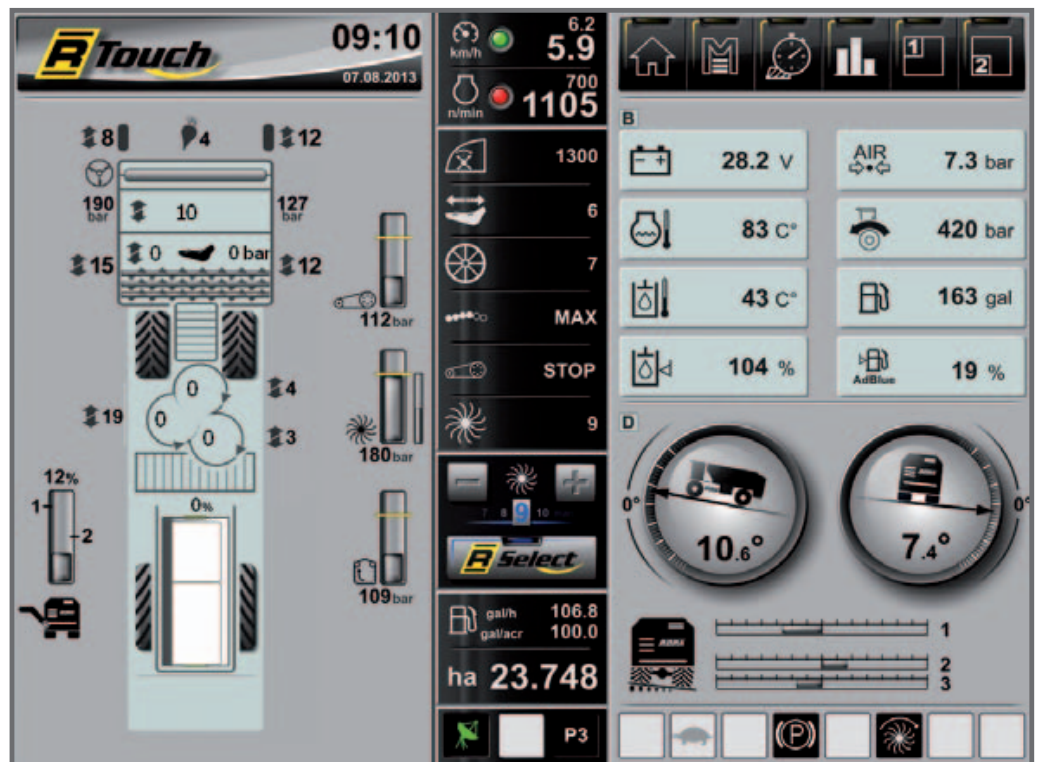
New cabin and operating concept

ROPA combines under the name R-Concept its new intuitive operating philosophy. A large 12.1 inch touch screen performs as the information and command center of the machine. From here the operator monitors the entire machine, receives information about operating conditions and performance data, adjusts functions and, thus, working results of the machine. The operation is performed dually, either with finger touch on the touch screen or with turning and pressing

the rotate buttons „R-Select“ and „R-Direct“, which are situated in the ergonomically perfect position at the newly designed control panel und the handle of the multifunctional joystick (with integrated mini joystick). The operator's place in the new „R-Cab“ suggests numerous possible adjustments for the ergonomic and comfortable seating position and at the same time increased visibility and heating of comfortable air seat. Premium class workplace!

Automatic folding

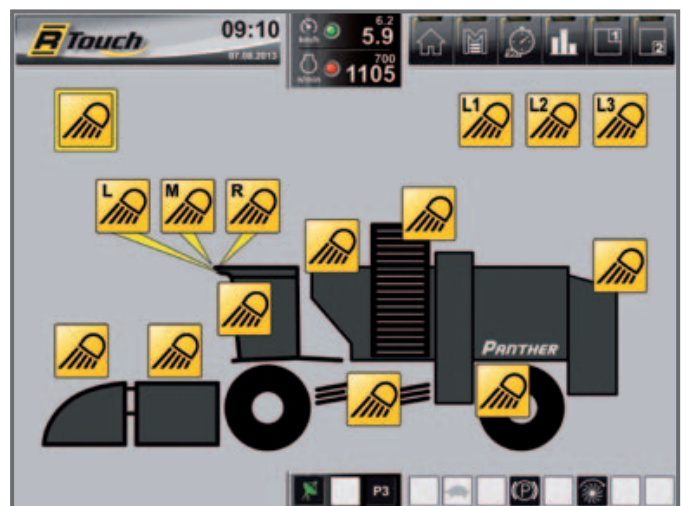
A button touch is enough to „transform“ automatically ROPA Panther from the road drive mode to the field mode, unloading elevator, 1m wide ring elevator, bunker auger and other groups fold one by one and partially simultaneously. The sensor-controlled monitoring systems exclude operating errors and collisions. The entire folding process is performed by simultaneous activation of all functions to 50 % faster than before.



Lights menu

One or all working lights can be switched on only with a fingertip on the touch-terminal.

And again a one fingertip is enough to back up and recall three different lighting programs.





R Select

Select important working functions

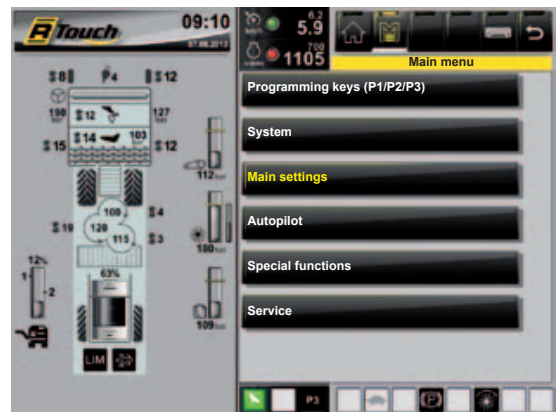
-> Functional group for intuitive selection and adjustment of all important functions during operation without significant prior knowledge.



R Direct

Directly in the terminal menu

-> Direct access to the main menu, as well as detailed machine settings and data request in sub-menus.





Turbine gates can be individually adjusted in height, inclination and rotation, as well as partially changed



Maximum ground clearance, optimum accessibility



Enormously huge and imposing new Michelin Ultraflex tyres. Good soil protection is maintained by the 800/70 R38 tyres at front and 900/60 R38 tyres at the rear axle, which require only 2 bar air pressure at full bunker load. The soil is protected and damping characteristics are improved at the same time. The diameter of the tyres is 2050 mm, providing large tyre contact area, a big advantage under wet harvesting conditions.

A man in a green jumpsuit stands next to a large yellow ROPA Panther harvester. He is smiling and giving a thumbs-up. The harvester has a large black Michelin Ultraflex tire with a yellow rim. The harvester's cabin is yellow and has a fire extinguisher on it. The background shows a clear blue sky and other yellow harvesters.

»The new ROPA Panther with
Michelin Ultraflex tyres sets new
standards for self-propelled
harvesting technic.«

*Stefan Dimberger, Strass
A passionate contractor and farmer.*



ROPA Panther - Technical Data

Engine:

Mercedes Benz diesel engine OM471LA 6-cylinder row engine, exhaust norm EUROMOT 4, 390 kW (530 hp), 12.8 l cubic capacity, max. torque 2450 Nm, operating speed 1250 1/min up to max 1650 1/min fully electronic, fuel consumption display l/ha and l/h at the terminal.

Traction drive:

First gear: 0-15 km/h lifting speed, second gear: 0-32 km/h.

Completely new traction drive construction with two braked front axles and new planet gears (500 mm hole circle diameter) with 4 planetary wheels, straight guide drive shafts, without ancillary drive gear for very high torque to the larger wheels.

Tyres:

First axle 800/70 R 38, second axle 900/60 R 38, large wheel diameter of 2050 mm, extremely soil protective and flexible Michelin tyres of Ultraflex technology, only 2 bar air pressure at full tank load, large surface area offers high operational safety even under wet conditions or on slopes.

Slope adaptation:

On a side slope the chassis can be inclined by 7 % to the slope through 4 hydraulic cylinders, slope adaptation is automatically regulated by an electronic measuring system.

Cooling system:

Side-by-side arrangement of cooling elements for loading air and water, dirt resistant positioning of the coolers at rear top surface. A hydrostatically stepless propelled and automatically reversible fan.

Hydraulics:

Pump distributor drive with pressurized air lubrication and gear oil cooling, Bosch-Rexroth propulsion with 280 cm drive pump, generous capacity operational load sensing hydraulics from Bosch-Rexroth, Bucher and Hydac.

Cabin:

New cabin positioning, sound-proof and tinted all-round glazing with low-line vision, heating and ventilating system (automatic air-conditioning), R-concept control console, 12.1 inch

R-touch-display, joystick-operation, autopilot, cruise control, engine control/engine diagnosis fully integrated in display, air-sprung Grammer comfort seat with heating, Bluetooth-MP3-radio with audio system, base console for telephone, whole screen wipers, 2 LED-internal lights, video-monitor with standard reversing camera.

Tank capacity:

ca. 20 to / 28 m³

Defoliator unit:

PIS - integral defoliator unit with leaf spreading between beet rows, 2 sensor wheels.

PAS - all-round defoliator unit, push-button operation from the driver's seat, can be changed for either integral topping or leaf ejection, 2 topper wheels (optional 4 topper wheels).

PBS - defoliator unit with leaf topping to the left, leaf auger and 2 topper wheels (optional 4 topper wheels).

PES - defoliator with leaf spreading between beet rows, 2 sensor wheels





Lifting Unit:

PR2 – 6-row lifting unit, 45 cm, 50 cm or variable, with faster oscillating share drive with axial-piston motor, hydraulic stone protection, 900 mm sensor wheels and adjustable taper roller bearing in oscillating shares and lifting unit drives, defoliator positioning enables raising for maintenance by 90 degrees for optimum control and service of flails, scalping knives and lifting shares, distance between fourth and fifth lifting rollers variably adjustable, excellent overview of lifting unit and topper without additional camera.

Cleaning:

800 mm wide infeed conveyor, 50 mm pitch, 1700 mm first turbine diameter, 1500 mm second and third turbines diameter, 1000 mm wide elevator, guide grid height of turbines is independently adjustable, partial replacement of guide grids by sprung tines is possible.

Electrics / electronics:

Integrated net 24 volt, light unit of 150 amps, 24 LED operating lights (Hella), Coming-home function, 2 x 12 volt sockets for radio or telecom etc., CAN-BUS computer system with integrated

diagnosis of all components connected to the terminal, software update per USB interface possible.

Unloading Conveyor:

Triple-fold conveyor for even easier establishment of 10-meter-wide clamps. The belt with 150 mm long fingers guarantees high throughput and short unload time, unloading conveyor width is 1400 mm for easier trailer loading, fast tank emptying in less than 1 minute, as longitudinal conveyors propel downwards to cross conveyors.

Loading height:

up to 4,00 m

Yield indicator:

2 ultra-sound sensors measure the tank content, full tanks (and partly loaded tanks) are added up and automatically recorded in the data bank.

Measurements:

Length: 13,40 m

Height: 4,00 m (transport mode)

Width: 3,00 m (6-rows at 45 cm width),

3,30 m (6-rows at 50 cm width and

45-50 cm variable)

Turning circle: 6,50 m inner diameter

Fuel tank: 1050 l diesel, 130 l Ad Blue

Standard:

Central lubrication chamber, fuel consumption measurement, air-conditioning.

Optional:

Leaf-spreader in stone protection model, skids for the scalper, wida shares, hard welded lifting rollers, guide grid segments with sprung tins in turbines 1-3, quirl in turbine 2, turbine camera, unloading conveyor camera, 2nd LCD colour monitor, 2 LED high beam lights, data printer, R-transfer with data export via Wi-Fi to ROPA App or USB stick, data input with task processing, distance control assistant, GPS speed sensor, leaf collecting equipment (only for defoliator with auger), bio-hydraulic oil, manual slope adaptation, automatic slope adaptation, 32 km/h version, additional axles (compulsory in Germany).

Correspond to TÜV, Trade and CE regulations. Subject to technical changes.



Existing protective covers have been partially dismantled for better imaging. The machine must not be operated without these covers!



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