



BiG M 450

SP high-capacity
mower conditioner





BiG M 450

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mower conditioner

- Powerful and fuel efficient 449 hp Liebherr engine
- Large 9.95 m (32'6") work width for maximum productivity
- Heavy-duty cutterbar with **SafeCut** blade protection



- Hydraulic running gear adjusts for more ground clearance
- **Silent Space** cab offers maximum operator comfort



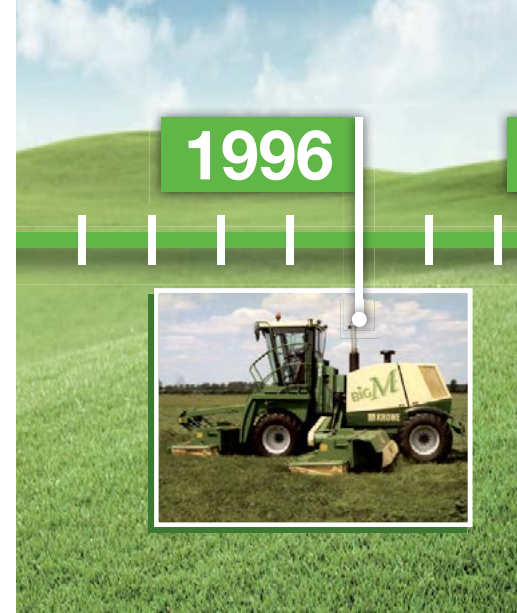
The new BiG M 450 KRONE represents a major upgrade of this legendary self-propelled mower. Offering huge work width, superior maneuverability, optimum weight distribution and tapping into enormous power reserves, BiG M 450 is the perfect mower for all fields, for flat and hilly land and for the most difficult crop conditions – a machine that excels in any application in any field in the world.

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The **BiG M** concept

- Optimum weight distribution
- Enormous maneuverability based on a professional design
- Optional swath mergers
- Low center of gravity for high stability
- 40 km/h (25 mph) road travel
- Best visibility and quickest changeovers



Premiere in 1996

BiG M was unveiled to the public on 20 May 1996. Featuring the well-proven EasyCut cutterbars, it offered a working width of 9.1 m (30') and 300 hp engine power.



BiG M 450

At Agritechnica 2017, KRONE introduced what was then the fifth generation of a BiG M mower. The mower conditioner received a comprehensive update and now offers a cutting width of 9.95 m (32'8"). The new 6-cylinder, in-line Liebherr engine with PowerSplit control delivers 449 hp and has plenty of power in reserve.



Big but very agile

Driven by wheel motors and 50° turning angle, BiG M is extremely easy to maneuver and thus offers great efficiency in small fields. An excellent front-rear weight distribution (64% : 36%) ensures that the self-propelled mower also handles perfectly in difficult terrain.



Merging versatility

When the swathing hoods on both mowers are closed the augers feed the material from the sides, windrowing it into one central swath. When cutting along field edges you can also close just one hood to present a clean windrow.



Quick and safe

Work at speeds of up to 25 km/h (15 mph) in the field and travel at up to 40 km/h (25 mph) on public roads while the engine speed is reduced to 1250rpm BiG M 450 offers particularly great operator comfort – courtesy of the hydro-pneumatic suspension on both axles. The running gear lowers hydraulically up to 15 cm (6") to bring the transport height of the machine down to less than four metres (13').



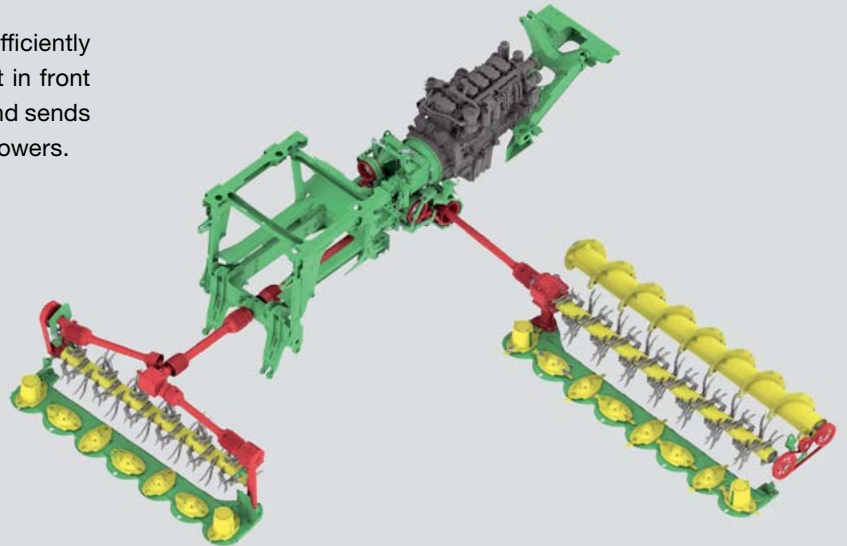
The **mowers**

- Direct drive through Powerbands and driveshafts
- Stepless and hydraulic cutting height control
- Front mower with optional auto sideshift relative to the current steering angle
- DuoGrip center-of-gravity suspension on the side mowers

The innovative KRONE BiG M 450 driveline allows operators to achieve work rates of more than 17 hectares (42 acres) per hour. The power flows from the axially mounted engine down the powerbands and driveshafts directly to the three mowers. And superior operator comfort and efficiency comes from hydraulic cutting height control from the cab and fully hydraulic ground pressure control.

Direct drivelines

All BiG M 450 engine power flows directly and efficiently to the three mowers. The transfer gearbox right in front of the axially mounted engine splits the power and sends it down belts and driveshafts to the individual mowers.



Convenient set-up

Ground pressure and cutting height on all units are conveniently controlled from the cab. Operators can program two cutting heights and ground pressures to the system and select the setting from the joystick.



DuoGrip

The side mowers are suspended in ball sockets in a center-of-gravity system, which ensures a uniform ground pressure across the full working width. The side pulling forces are absorbed by two parallel arms. The design results in a large pivot range for consistently clean cuts in sloping fields and along ditches.



Controlled break-back

The standard break-back system allows the side mowers to swing to the rear when hitting an obstacle. Once the obstacle has been passed the mower returns to its working position.

No skips on slopes and in curves

The front mower is available with an optional sideshift function. After a sensor detects the current steering angle the mower moves hydraulically to the right or left and relative to the current position of the wheels. The feature eliminates the risk of skips when cutting in curves and on sloping fields.

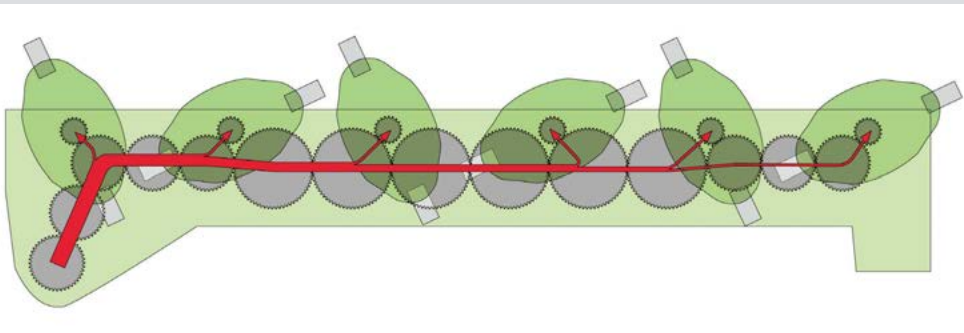




The **EasyCut** cutterbar

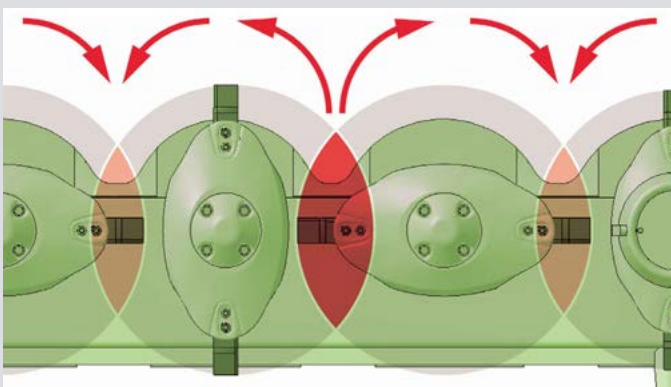
- Fully welded and permanently lubricated heavy-duty cutterbar
- SafeCut shear-pin protection for each individual disc
- Satellite driveline smooths the power flow inside the cutterbar
- SmartCut system ensures a perfect cut
- Added protection from wear

The BIG M 450 features a heavy-duty version of the famous EasyCut mowers. The power flow enters the mower from the rear through the gearbox and flows down a driveline of massive and quiet-running spur gears that drive the satellite gears and the discs. KRONE SmartCut implements a generous overlap of those discs that turn away from each other, which translates into a perfect cut. Meanwhile the SafeCut system protects the blade from damage caused by hitting an object.



Satellite driveline

The KRONE satellite driveline is made up of massive spur gears that turn at reduced speeds for quiet running and reduced wear. The discs are arranged in a forward position that ensures clean cuts.



SmartCut for reduces skips

With some discs turning in pairs towards each other and others turning away from each other, it was necessary to redesign the degree of blade overlap to ensure cleanest cuts. For stripeless cuts in light and young crops, blade overlaps have been increased on the discs turning outwards. In addition, the blades turning to the rear are now further apart to promote smooth flows of large volumes of crop.



Wide flotation skids

Extra-wide skids minimize the ground pressure and give maximum protection to the ground. As a side effect, they also protect the cutterbar from damage. Optional high-cutting skids are also available and recommended in rocky conditions.



SafeCut

Each disc on the mower has its own individual impact protection. When the blade hits an obstacle, the shockload is transferred to a roll pin which breaks. As a result, the disc moves 15 mm (0.6") up on its threaded drive pin and clear out of the risk zone and away from the neighbouring discs.



Quick blade changes

Swap blades in a matter of seconds – just use the tool supplied.

Minimized wear

The blades rotate through a full 360 degrees avoiding obstacles and damage. The discs themselves are hard-faced to withstand wear more effectively.





The conditioner

- High-performance conditioners for haulm crops
- Full-width conditioning
- V-type steel tines for thorough and gentle treatment
- Conditioning thoroughness is adjusted without tools

The KRONE CV conditioner ensures fast and uniform dry down at high throughputs. The conditioning thoroughness is set by selecting a rotor speed (700rpm or 1000rpm) and by tool-free adjustment of the gap between the rotor and the baffle plate.



Conditioner rotor with steel V-tines

The V-type steel tines on the 64 cm (25") diameter rotor feed the crop past an adjustable baffle plate which rubs the wax layer off the plants. The V-tines are made from hardened steel and are arranged at a steep angle, treating the material very thoroughly and pulling it effectively through the unit.



Steplessly adjustable

The gap between the tines and the baffle plate is adjusted steplessly by means of this lever. The smaller this gap, the more thorough is the conditioning.



Side drive

The side mowers on BiG M 450 are powered by drive-shafts. A side-mounted gearbox offers a number of benefits: the conditioner rotors are not split but work effectively across the full machine width. By eliminating the central gearbox, which was previously mounted between the conditioner and the cutterbar, our developers have created extra clearance for more material to pass through at low power inputs.



Adjusting the gearbox speed

Adjusting the thoroughness of the conditioning effect to the prevailing conditions is quick and easy as the operator changes the rotor speed on the side-mounted gearbox speed from 700 rpm to 1000 rpm or vice versa without using tools.





BiG M 450 CR – with roller conditioner

- Equip with optional steel or rubber rollers
- Set the conditioner hydraulically
- Conditioning over the full working width of 11.2 m (36'9")
- Front and side mounted mowers with identical working widths
- Windrow widths of 1.55 to 2.22 m (5'11" to 7'3")

The KRONE roller conditioners are particularly suitable for thorough yet gentle conditioning of leafy forage such as clover or alfalfa.

Depending on the respective operating conditions, select either rubber or steel rollers (M-Rolls) to accelerate dry down.



Gentle conditioning with rubber

The V-shaped profiled rubber rollers have a large diameter of 25 cm (10"). They provide for thorough conditioning of large volumes without loss of leaves.



Steel for extreme cases

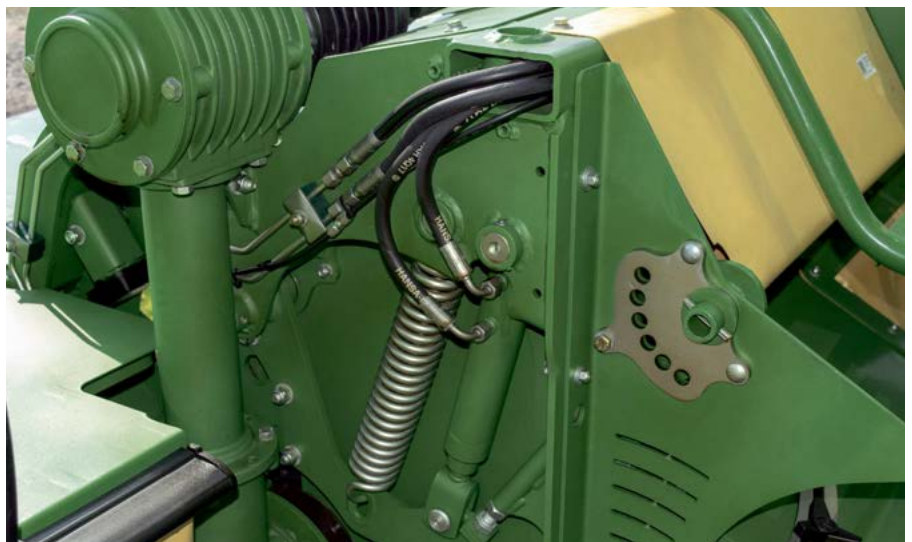
The steel roller conditioners are highly robust and resistant. Under extreme operating conditions, the M-Rolls guarantee a long tool life. Their special M profile ensures that the volumes produced by the high throughput of the BiG M are optimally conditioned by thorough bending of the stems.





Finger-tip adjustment

The distance between the conditioner rollers is set hydraulically from the cabin. This allows for fast and easy adjustment to all kinds of operating conditions, ensuring thorough and even bending of the stems and gentle conditioning of the leaves.



High rotational speed

The top and bottom rollers are driven by a heavy-duty gearbox. Rotating at a speed of up to 950 rpm, the roller conditioners thoroughly condition the forage for premium quality.





BiG M 450 CR - with roller conditioner



Time is money

With a total width of 11.2 m (36'9") the BiG M 450 CR can mow up to 18 ha (45 acres) per hour. Thanks to this high productivity, the forage can be harvested at the right cutting time, even when the harvesting window is tight.



Suitable for narrow and wide windrows

For all mowing units, the window width can be adjusted from 1.55 to 2.22 m (5'11" to 7'3") by means of two windrow sheets. This allows you to adjust the windrow width to the crop and the desired drying time.



Windrows of identical widths

The front as well as the two side mowing units have a cutting width of just under 4 m (12'9"). When mowing with the swath hoods attached, three swaths of identical size are deposited which promote an even and fast drying process. The large track width of the BiG M 450 CR prevents the wheels from passing over the swath for loss-free harvesting of uncontaminated forage.



Partial-width delivery or swathing

With one or both sides of the merger hood closed, the swaths from the rear mowing units can be merged by means of their auger conveyors to be delivered centrally on the swath deposited by the front mowing unit. This reduces the number of trips across the field.



The **swath mergers**

- Augers with fingertip-controlled hoods
- Augers ensure a clean and gentle crop feed
- Crops hardly touch the ground – minimum contamination results in better forage quality
- Perfect windrows for the forage harvesters

Cutting, conditioning and producing one single swath – the BiG M 450 completes three tasks in one operation. With the augers forming an integral part of the side mowers, they deposit the material on the swath that was formed by the front mower without the material touching the ground at all, for a cleaner crop and reducing a pass in the field.



Fingertip control

The merger hoods can be opened and closed conveniently from the cab, spreading the material across the cutting width or feeding it to the central swath that was formed by the front mower.



New merger hoods

Opened wide, the merger hoods present the material in a fluffy and uniform windrow. BiG M 450 memorizes the previous setting of the hoods and retrieves it when the mowers lower into work. The new augers have 20% larger flights for higher throughputs and an even gentler crop feed.



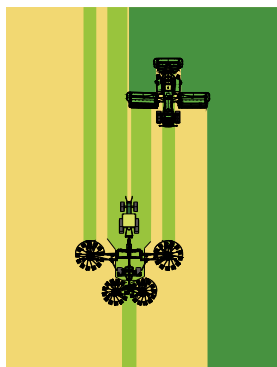
Reliable and long-lasting belts

The massive windrow merging augers are driven by strong and reliable belts.



Spreading the material at full width

When the merger hoods are open, the material flows over the turning augers and spreads across the full machine width for uniform and fast drying, thereby eliminating one tedding pass.



Independent swathing

Open one hood only and BiG M 450 swathes the material to one side. In one up-and-down pass, the machine windrows 19.90 m (65') into less than 13.00 m (42') for easy follow-up with the four-rotor rake which groups it into one single swath – a system that makes perfect use of the following machines.

Swathing

When both swathing hoods are closed, the two augers feed the material directly to the central swath that was formed by the front mower – an approach that substantially reduces crop loss and contamination and eliminates the raking pass.





The **traction drive** and **running gear**

- Infinitely variable power transmission via wheel motors
- Engine speed reduced to 1250 rpm in road travel for better fuel economy and quiet running
- Hydro-pneumatic axle suspension for high operator comfort
- Hydraulic axle height control adjusts ground clearance to conditions

Wheel motors bring the power steplessly on the ground and make BiG M 450 very easy to steer and maneuver. The axles boast hydro-pneumatic suspension for ultimate operator comfort and hydraulic height control, so that operators can easily adjust the ground clearance of the machine in field work and for road travel at reduced transport height.



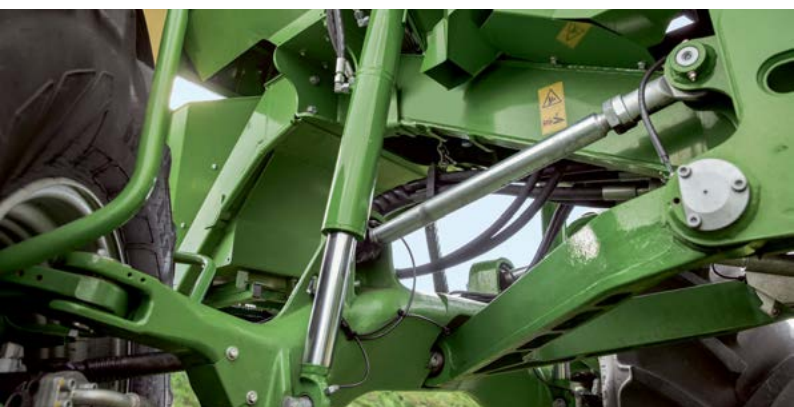
Agile and long lasting

The hydraulic wheel motors make the BiG M 450 an extremely agile machine which maneuvers easily even in small fields. Each wheel is driven by an axial piston motor and a planetary gearbox. Unlike traditional drive trains which use universal joints, this type of wheel drive is very robust and long lasting.



Plenty of clearance

Thanks to the drive concept using wheel motors, the BiG M has no axles that run close to the ground. In field mode, moreover, hydraulic cylinders automatically raise the running gear by 15 cm (6"), giving the machine plenty of ground clearance for work in high yielding crops.



Maximum ride comfort

The front and rear axle on the BiG M 450 have hydraulic height control and hydro-pneumatic suspension – features that offer operators an ultimate ride comfort both in the field and on public roads. For example, they can lower the running gear to bring the transport height to less than 4 m (13').



In road mode

The maximum road speed is 40 km/h (25 mph) which is generated at 1250 engine rpm. At the same time, engine speed is automatically controlled relative to the current ground speed and load. For example, the system reduces the engine speed when the machine is waiting at a traffic light or when it is approaching a junction, saving a great deal of fuel and reducing the load on the engine and the drives.



Tire choices

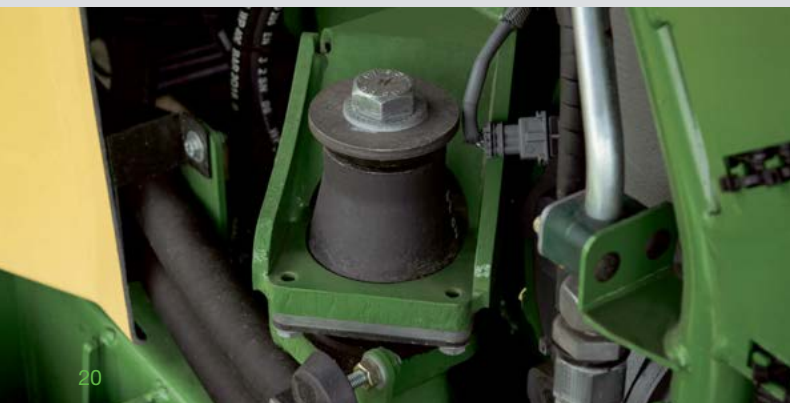
BiG M 450 comes with 800/65 R 32 (front) and 600/65 R 28 (rear) bar-tread flotation tires as standard, which give the machine the necessary traction and protect the ground. Flotation Trac 800/60 R 32 (front) and 600/60 R 30.5 (rear) tires from Vredestein are also available as an option for grassland applications. This tire is very gentle on the ground.



The engine

- 6-cylinder, 449 hp Liebherr engine, Tier 4 final compliant
- Long 1500-hour service intervals
- Extremely fuel-efficient thanks to PowerSplit engine control
- Automatic load limit control for maximum efficiency
- Mounted on silent blocks for quiet running
- Large radiator with passive rotor for optimum temperature control

The 449 hp Liebherr engine features automatic engine control which tailors the output to the current load on the mowers. Consequently, BiG M 450 will use less fuel in lower-yield crops. A new load limit control system monitors the engine speed and reduces the driving speed when engine speed is very low. Mounted on silent blocks, the engine runs very quietly in all situations.



Clean engine technology

The Liebherr engine that powers the BiG M 450 is Tier 4 final compliant and uses SCR technology (Selective Catalytic Reduction) to achieve clean combustion. The technology injects urea into the exhaust stream upstream of the catalytic converter which converts the nitrogen oxides that develop in the engine during the combustion process into natural nitrogen and water. The fuel tank holds 780 liters (206 gallons) and the urea tank 80 liters (21 gallons) to last through long working days without the need for refueling.

Power on demand

The KRONE PowerSplit engine control monitors the engine speed. In Eco mode, the engine starts off at 1650 rpm and puts out 354 hp. It changes into M mode when a higher power requirement is detected. The output in M mode is 449 hp. Load limit control kicks in when engine speed droop is excessive. As output is adjusted automatically, fuel consumption decreases significantly.

Smooth running

The engine and the transmission rest on silent blocks, which makes for quiet running and reduces noise level.



Optimum efficiency

A new load limit control system allows operators to make even more efficient use of their machine. The system reduces the driving speed automatically as soon as the engine is revving within a specific range and thereby ensures the cut is always perfect.



Active radiator cleaning

The BIG M features an active radiator cleaning system, which comprises a rotary and fine-mesh screen that keeps debris out of the radiator. The rotating screen passes a suction fan that removes the debris from its surface. This system design ensures the engine temperature is always in the optimum range.



Optimum position

Mounting the engine centrally between the rear and front axle brings a number of benefits: short drivelines to the mowers, an ideal 64%:36% front/rear weight distribution and a low center of gravity.



The **cab**

- Large windows offer perfect all-round visibility
- Maximum seating and operator comfort
- 10-inch operating terminal with color-display touch screen
- Optional LED package for maximum lighting
- Modern armrest with integral joystick

Mounted on hydro bearings, the SilentSpace open-space cabin is very quiet, offers plenty of space and an ergonomically designed environment. The standard specification level comprises a high-resolution 10-inch touch screen terminal where the operator enters and monitors all machine settings, an armrest with integral joystick, as well as automatic climate control and an electric cooling box. More comfort is available from the optional LED package or the Premium comfort seat.



Excellent visibility

Larger windows and slim posts, the cabin of the BiG M makes for excellent visibility of all mowers. The double floor ensures noise levels are reduced and a comprehensive line-up of work lights with optional LED headlights on the roof and the panels turn night into day.



Convenient steps

There are also offside steps, so operators can easily clean the windshield. The steps are available with optional LED lights for safe access and exit at night.



High-comfort cab

The optional Activo Premium is a ventilated and heated comfort seat from where all controls are in easy reach. The comfy seat ensures fatigue-free work during long days in the field. The large 10-inch operating terminal records all major machine data and displays them on the high-definition color screen, where the operator enters many of the machine settings. A reverse drive camera with display screen is an option for perfect overview of all elements.

Fingertip control

The ergonomic joystick is integrated in the armrest on the driver's seat. Its softkeys and buttons are clearly marked for easy use. The joystick offers convenient control of all machine functions simply by pressing a button. Buttons are customizable to suit individual operator needs.



Service and maintenance

- Sensor-based automatic central lubrication
- 1500-hour or 2-year engine service intervals
- Optimum accessibility through wide opening covers
- Plenty of storage space for tools and parts
- Large 780-liter (206 gallon) diesel and 80-liter (21 gallon) urea tanks

BiG M 450 is specified with many details which make service and maintenance a lot easier and reduce the time spent on these jobs. The sensor-controlled automatic central lubrication system supplies oil to most lubrication points.



Engine service

The large hood opens wide for easy access to the engine and convenient servicing and inspection. The service intervals are particularly long – 1500 hours or two years.



Larger fuel capacity

The large 780-liter (206 gallon) fuel and 80-liter (21 gallon) urea tanks reduce refill stops. The filler necks of both tanks are readily accessible via safe steps and a platform.



Larger lubrication capacity

Most lubrication points are attended to by an automatic central lubrication which services all points sensor controlled – a system that ensures the machine is given optimum attention.



Plenty of storage space

Two storage compartments are arranged underneath the panels between the cab platform and the front wheels. The battery compartment and the main switch are located above the nearside front wheel with assorted parts stored to its left hand side. The compartment on the offside wheel stores water for the wipers and for operators to wash their hands and offers room for plenty of storage capacity.



Large storage compartment

At the rear of BiG M there is another large compartment that stores two blade holders and the blade wrench plus a toolbox.



Easy maintenance

The blades are easy to get at for quick blade change and replacement after the operator folds back the cover and guard cloth.



Further **specification options**

- ISOBUS steering system provision and SectionControl help reduce operator fatigue
- High-cut skirts for cuts of more than 90 mm (3.5") in height
- LED light kit for 360° illumination

A wide range of further extras are available as factory-installed options to boost operator comfort and create an even more pleasant operator environment.



Increased productivity

BiG M 450 is ISOBUS automatic steering ready and adopts control systems from various manufacturers. The automatic steering system uses GPS data and the correction signal to steer BiG M automatically and without operator interference along the crop line, allowing just a minimum overlap (left). This way the machine makes maximum use of its massive working width and potential.



Hydraulic side guards

The side guards on the mowers fold up before the machine moves into transport position to ensure road transport width does not exceed 3 m (9'10"). The side guards on the front mower fold up hydraulically as an option.



Lights all round

The optional LED package brings 360° lighting to the machine and turns day into night. Machines that are specified with this package have LED lights all round including the lights on the service points and ladder lighting. This improves all-round view in poor light conditions.



Technical data

		BiG M 450 CV	BiG M 450 CR	
Engine	Engine model	Liebherr D946 A7-04		
	No. of cylinders	6		
	Engine displacement	Liters	12	
	Max. output to ECE R120 and 1650 rpm	kW/hp	330 / 449	
	Max. output to ECE R24 and 1650 rpm	kW/hp	310 / 422	
	Rated speed	rpm	1.650	
	Fuel tank capacity	l (gal lqd)	780 (206)	
Traction drive	Model	Infinitely variable hydrostatic drive via wheel motors		
	Work rate	km/h (mph)	Max. 25 (15)	
	Transport speed	km/h (mph)	40 (25) (at 1,250 rpm)	
	4WD		Standard	Option
	Traction Control		Standard	
Axles	Steering angle	Degrees	53	
	Rear axle steering		yes	
	Front/rear axle suspension		hydro-pneumatic	
Mowers	No. of mowers		3	
	Working width	m (ft.)	9.95 (32'8")	11.20 (36'9")
	Conditioner speed	RPM	700 / 1.000	950
	Conditioner model		V-type steel tines	Rubber or steel rollers
	No. of cutting discs		6 / side mower 5 / front mower	8 / mower
	No. of mower drums		2 / side mower 2 / front mower	4 / mower
	Blade replacement		Quick-change blade system	
Cab	Air seat		Standard	
	Helper seat		Standard	
	Climatronic with cooling box		Standard	
	In-cab information system		Standard	
Overall dimensions	Transport width	m (ft.)	3.00 (9'10")	3.63 (11'1")
	Transport length	m (ft.)	8.45 (27'9")	8.40 (27'7")
	Transport height	m (ft.)	4.00 (13'1")	4.11 (13'6")
	Weight depending on specification	kg (lb)	15.500 (34.171)	16.500 (36.376)
	Weight distribution front/rear axle	%	64 / 36	
Tire choices	Front: Mitas AC 70 N 800/65 R 32		Standard	
	Rear: Mitas AC 65 600/65 R28		Standard	
	Front: Vredestein Flotation Trac 800/60 R 32		Option	
	Rear: Vredestein Flotation Trac 600/60 R 30.5		Option	

All specifications, weights and dimensions do not necessarily comply with standard specifications and are therefore not binding.

Maschinenfabrik Bernard Krone

Perfect in every detail



Innovative, proficient and close to our customers – these are the keywords that mark the philosophy of our family-owned company. As a forage specialist, KRONE manufactures disc mowers, tedders, rakes, forage wagons and silage trailers, round and square balers as well as the high-capacity and self-propelled BiG M mower conditioners and our BiG X forage harvesters. Quality made in Spelle – since 1906.

Your KRONE dealer



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