FMWORLD

/FOR THE WORLD/

SUGARCANE HARVESTER

HONGLONG4GQ–1

190 HP



COMMITTED TO
FULL MECHANIZATION
OF MODERN AGRICULTURE

FMWORLD

Wechat Public Number

Jiangsu World Agricultural Machinery Co.,Ltd.

Add: Picheng Idustrial Park,Danbei Town,
Danyang City,Jiangsu
Postal Code:212311
Fax:+86-511-86349102
Tel:+86-511-86349102

Web:www.worldnyjx.com
Email:worldgroup@vip.163.com
Facebook:JIANGSUWORLD

COST-EFFECTIVE, HIGH RETURNS ON INVESTMENT

Honglong4GQ-1 is a sugarcane harvester independently researched and developed by World Agricultural Machinery, which is specially used for the row spacing above 1.1m.

The R&D cycle of 4GQ-1 in China is 5 years. After three years of market and technology precipitation, the market capacity of 4GQ-1 in China exceeds 400 units. The 2022 4GQ-1 sugarcane machine is grandly launched.

Impurity rate, loss rate, germination rate and other important indicators to meet market demand, 4GQ-1 is the most mature and cost-effective sugarcane harvester of our company.

HongLong
4GQ-1

Product portfolio



Honglong4GQ–1

Hopper type

Adaptability:Small and medium size field

Power: 190HP

Row spacing: 1.1

Slope:≤ 10°

Advantege:

One button cane unloading operation, trailer is no longer needed, the issue of trailer hardly entering small size field is totally resolved.

Topper

Standard two drums topper, maximum 3.6m topping height.

Power System

In-line 4 cylinders high torque YUCHAI engine Power up to 190 horsepower, can switch three output modes with one button, easy to cope with complex working conditions.

Extractor System

1000mm working diameter extractor, stepless adjustable extractor fan speed, speed range is 1000-2100r/ min, low vibration and good balance.

Intelligent Cab Operating System

The combination of Beidou positioning and 4G communication technology. Real-time monitoring of the whole vehicle's sensors realizes visualization and intelligent operation.



Feeding System

1200mm divider shoe distance, capable of harvesting multi-year tillering ratoon cane, the height of divider is adjustable, even lodged cane can a lso be easily harvested.

Base Cutter System

690mm working diameter base cutter, high torque twin hydraulic motors drive, multi-year tillering ratoon cane can be cut easily.

Driving System

High torque hydraulic motors drive, suitable for 1.2m row spacing, moving is controlled by a single joystick, stepless adjustable, which is easy to operate.

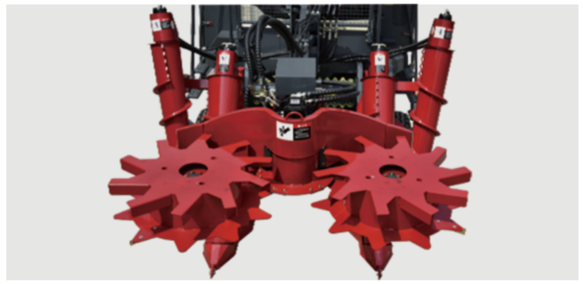
Conveying System

600mm width conveying train, capable of feeding more sugarcane simultaneously, Increasing the amount of sugarcane conveying, the hollow core structure of the drum improves the performance of conveying, peeling and removing magazines.

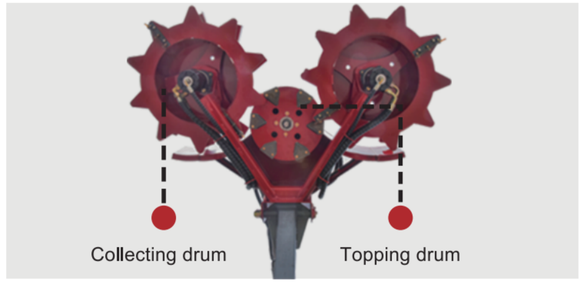
Topper System

Double disc topper, hydraulic driven, max 3.6m topping height

- Two drums topper driven by hydraulic motors, ensure the smooth topping of sugarcane, the dumping direction is controlled by the operator;
- 695mm diameter topper drums with large working range，At the same time, three-wave wheel design, effectively discharge impurities;
- Topper's boom and base are made of high-strength steel with good anti-vibration performance. Equipped with hydraulic accumulator. stable even harvesting in the field with the bad condition, maximum 3.6m height reach is available.



Double layer design, double the efficiency



Topper system including collecting drum and topping drum, topping drum can rotate reversely, good topping performance.



Collection hight



Feeding System

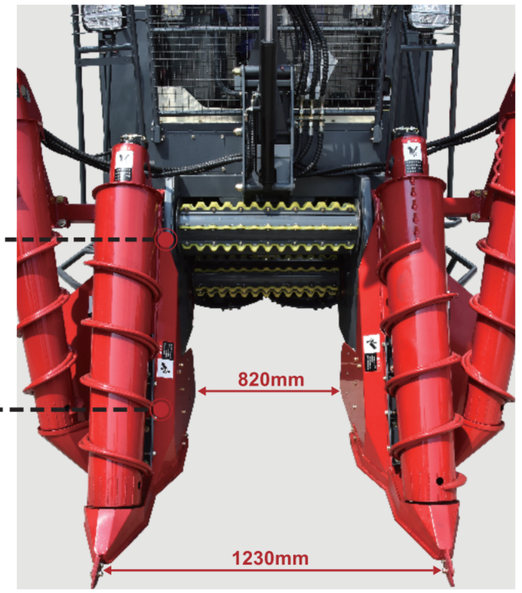
Lodging killer

- Height adjustable divider, the operator can adjust according to the field condition, to better adapt to the lodged cane of the various situation, ensuring the smooth.

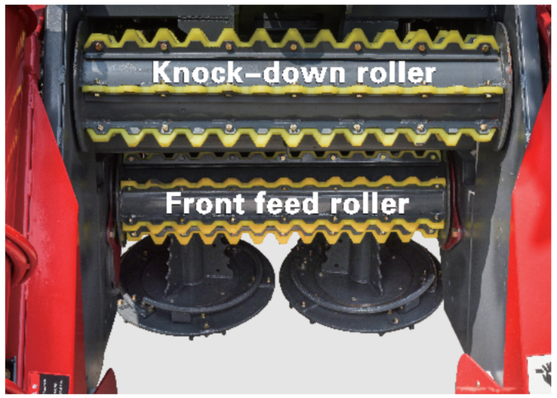


- Set a cutter inside the cane lifting divider to ensure that the divider does not entangle the grass during harvesting.





Optimized feeding system Adjustable according to agronomy

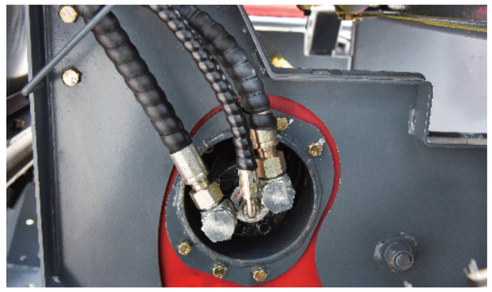


- Divider rollers of inside and outside rotate in opposite direction, which can push away the adjacent sugarcane from the harvester, and the entangled cane can also be separated, so that the inside rollers can pick up the lodged sugarcane.

- The height of the knockdown roller can be adjusted, and the rubber protection plate can be added to prevent sugar cane from breaking the skin and reduce sucrose loss. Front feed roller, auxiliary feeding, at the same time equipped with the anti-entangling device, reduce maintenance costs.



- Divider shoe with longer font tip, which can easily lift the lodged sugarcane and feed into the machine when adjusting it close to the ground,reducing loss to the greatest extend.



- The height of the knock down roller is adjustable manually, suitable height can make uniform feeding of cane, reducing cane loss and damage.

Base cutter System

High torque two motors drive, good cutting surface

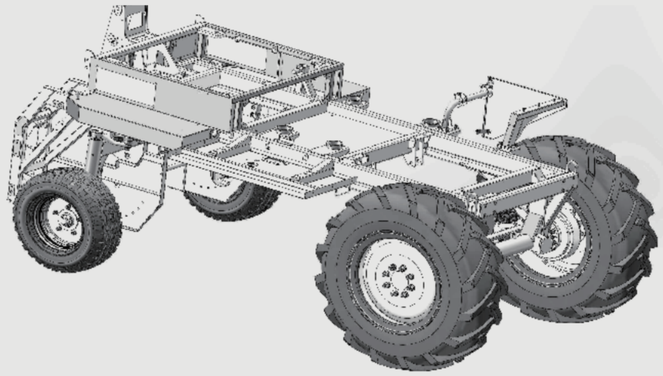
- Base cutter is driven by piston motor with strong power, the high-speed rotating blade can easily cut all sugarcane from the root ; A 665 mm workingdiameter can easily cut off multi-year tillering ratoon cane.
- Height of base cutter can be adjusted by hydraulic cylinder, The upper and lower adjustable range is 385mm. which can be adjusted below ground to cut. Meeting your demand of different cutting height.
- The grass blocking structure of the base cutter protects the drive shaft of the base cutter from the entanglement of weeds and vines during operation, and reduces the risk of poor cutting effect caused by torque loss;
- The 8-piece cutting blade can be replaced, and the blade can be used in the opposite direction after wear, which saves cost and is easy to disassemble.





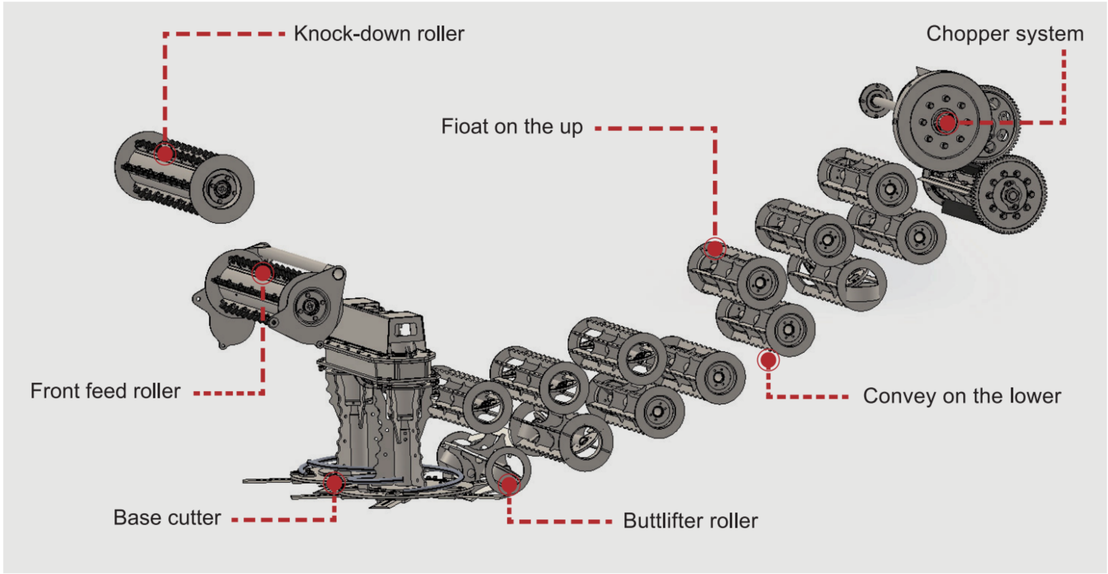
Driving System

- The harvester adopts the overall beam structure, the whole machine has a low center of gravity, high driving stability and strong slope adaptability (equipped with slope alarm function). Unique set of climbing gear, easy to climb or walk in soft fields.



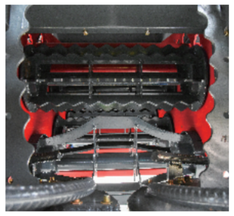
Conveying System

- 600mm width conveying train that more sugarcane can be feed into, 13 feed rollers are installed inside makes feeding more fluent, the feeding capacity is up to 5.5kg/s.
- Feed rollers below are specially designed with arc shape which facilitates the intense feeding of cane making sure cane can spread out across the whole width improving feeding conformity and chopped billets length consistency; the corrugation structure on the periphery of rollers, and roller rotation speed difference can help to feed sugarcane and also remove cane leaves and trashes, which greatly reduces the workload of the extractor, the hollow structure can ensure that during the rainy season harvesting, it can prevent the accumulation of mud and weeds, resulting in the blockage of the conveyor.
- During cane conveying, the cane can be cleaned by the gap between the feed rollers and the chopper; these gaps allow soil and stones to fall from the sugarcane before the sugarcane is chopped, reducing the subsequent workload of the discharging device; The upper and lower feed rollers are rotating reversible preventing cane choking.



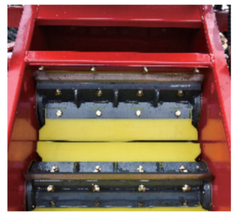
Buttlifter roller

- The hollow-designed roller can prevent mud from piling up, ensuring efficient feeding of cane, avoiding failing feeding.



Chopper system

- Cut sugarcane by two pairs of chopper wheels to cut, Equipped with six 540mm high strength blades are driven by hydraulic piston motor and flywheel inertia, can easily cut sugarcane and throw, the chopped cane is 18-22cm long.



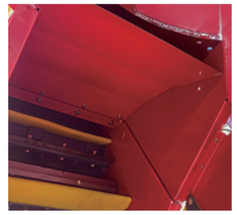
Floating upper rollers

- Upper feed rollers can automatically float up and down according to cane feeding quantity, to prevent the excessive squeeze and damage of sugarcane resulting in the loss of sugar.



Sugarcane deflector

- Sugarcane deflector is placed after chopper, which is angle adjustable that chopped sugarcane can be directed from the chopper to extractor in an appropriate angle. The larger the angle, the closer the distance between cane and extractor fan, and the better the trash removing performance; The small-angle can reduce the rate of sugarcane from being smashed by an extractor fan.



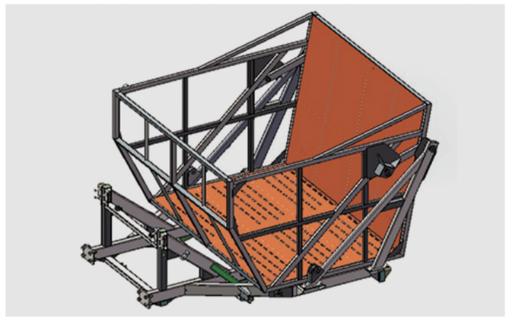
Hopper

One button operation

- Equipped with HD camera, timely attention to the hopper situation in the cab, and display the unloading situation.
- The Hopper capacity is 800kg.
- Unloading is easy to operate, controlled by a hydraulic cylinder, the operator can just press the unloading button to unload.
- Hopper perforated plate below can further filter particles.





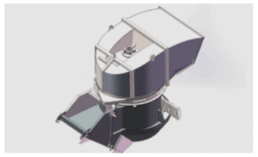


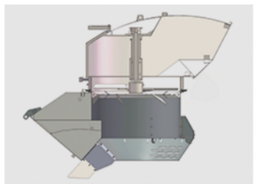


Extractor

Stepless adjustable cleaning technology 2200r/min adjustable fan speed

- Stepless adjustable extractor fan speed, the operator can adjust fan speed as required, the maximum fan speed is 2000r/min. Strong airflow ensures removal of sugarcane impurities.
- Extractor hood can be turned horizontally, the outlet faces the ground to ensure that impurities do not blow into unharvested sugarcane fields.
- Extractor hood and fan blades are made of high strength material, Improve the wear resistance. The fan adopts the whole dynamic balancing machine, small vibration, good balance.









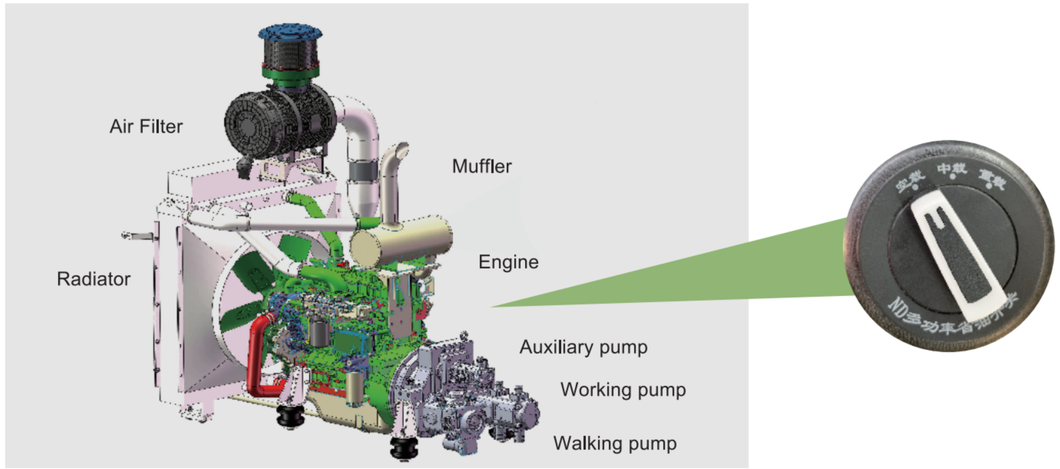


Power System

Four-cylinder engine

- Yuchai four-cylinder engine, national III emission standard, large torque, energy-saving, superior performance.
- The radiator system is accessible through the door, which can be directly opened for cleaning and maintaining, and the internal grass blocking net cover can be taken off to clean up the debris.
- The engine has three power modes. The main advantage is that it can distribute the engine power reasonably, fuel consumption is reduced at low gears, and engine power will be used maximally at high gears. We recommend you use the low gear when driving on the road, and use middle gear when harvesting low yield field, and use high gear in high-yield field.
- Radiator sundries can be directly opened and cleaned by the water tank door.





Hydraulic System

Lodging killer

- Based on years of understanding of the hydraulic system of sugarcane harvesters and experience in heavy machinery design. Engineers have optimized the layout of the 4GQ-1 hydraulic system, so that the pressure flow and the work of the vehicle are more matching and reasonable, reducing the energy loss of the vehicle and reducing the power consumption of the vehicle.
- Action components are driven by three different hydraulic pumps, Drive walking system, Extractor, and other hydraulic cylinders respectively. which can ensure the normal operation of different components of the machine, also errors can be quickly found if any hydraulic breakdowns.





Cab

Spacious and luxury

- A new cab design Large space make driving more comfortable, convenient and intelligent for the operator.
- Luxury air conditioning, three-level adjustable shock seats, soundproof glass, better driving experience.
- 180° driving Angle, clear night lighting, equipped with a protective net, reduce the impact of sugarcane on the cab.
- Equipped with double screen display, timely observation of the machine's working condition.



















- Three-level adjustable shock seats
- Adjustable steering column perfectly matches different operators
- Base cutter height indicator, know the height of the base knife in time
- Sun blinds can effectively block the strong light from entering
- Understand the working condition of the whole machine through the screen
- Equipped with radio and sound system

Operation System

- The layout of the operating platform is reasonable, in line with the operator's habits, and improving the convenience of harvesting operations.
- Dual driving mode with manual control and foot control to meet different operating habits.
- Various functional parts control buttons are integrated into a panel and the operation buttons are simple and clear.



Maintance

Convenient maintenance, save your time, improve work efficiency

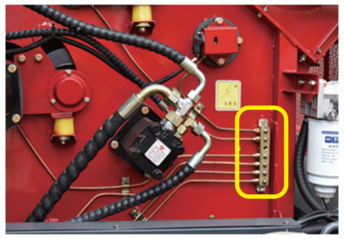




- Automatic monitoring machine working condition, feedback fault information, remind machine maintenance.



- The hydraulic system is convenient for inspection and maintenance, and the automatic lubrication system of conveying chain is opened with one key.



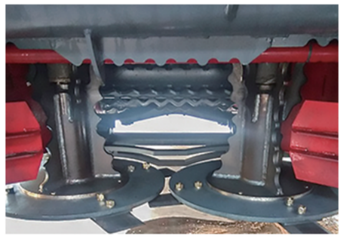
- Integrated butter lubrication system for conveying roller bearings.



- Air filter element is easy to clean and replace.

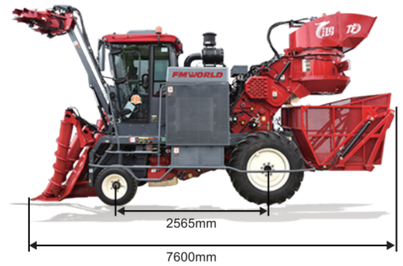


- Hydraulic oil radiator, engine radiator, large space for dust cleaning.



- The Basecutter blade is easy to replace and can be used on both sides.

Size and parameters









Model	Unit	4GQ-1
Harvesting rows	row	Single
Row spacing	m	≥ 1.2
Engine model	/	YCA05190-T300
Engine ratedpower	kW	140
Engine rated RPM	r/min	2200
Dimension	mm	7600×2320×3600
Transport dimension	mm	8020×2320×3600
Front tire	/	10.5/65-16
Rear tire	/	14.9-28
Front track	mm	1710
Rear track	mm	1560
Transmission type	/	Hydraulic
Max. driving speed	km/h	0-25
Net harvesting efficiency	hm2/h	0.24
Rated feed quantity	kg/s	5.5
Weight	T	6.8
Fuel tank	L	200
Hydraulic oil tank	L	180
Wheelbase	mm	2565
Min. ground clearance	mm	245
Topper drums rotation diameter	mm	695
Divider shoe distance	mm	1200
Base cutter working diameter (single)	mm	690
Width of conveying train	mm	600
Primary extractor rotation diameter	mm	950
Chopper blades qty	/	6
Length of chopper blade	mm	580
Chopped billets length	mm	180-220
Cane unloading component	/	Hopper