

รถแทรกเตอร์ XCMG XCT 80

ลักษณะทั่วไป

- น้ำหนักยกสูงสุด 80 ตัน ที่รัศมี 3 เมตร
- บูมหลัก 5 ท่อน ความยาวบูม 12.4-47.5 เมตร พร้อมรอกใหญ่พิงัดยกสูงสุด 80 ตัน และรอกเล็กพิงัดยกสูงสุด 7.0 ตัน
- บูมหลักหน้าตัดแบบตัวยู (U) บูมท่อนที่ 2 ยึดอิสระ และบูมท่อนที่ 3,4 และ 5 ยึดออกพร้อมกัน
- จีบแบบเหล็กสาน แขนงติดอยู่ข้างบูมหลัก 2 ท่อน ยาว 10.5 และ 17.5 เมตร สามารถประกอบทำมุม 0, 15 และ 30 องศา กับบูมหลัก
- น้ำหนักรวมทั้งหมด ขณะวิ่ง 50,000 กิโลกรัม

ตัวรถเครนล่าง

- รถแบบ 12 ล้อ 4 เพลา 2 เพลาหน้ายางเดี่ยว ขนาด 14.00-25 2 เพลาหลังยางคู่ ขนาด 12.00-24 รวมจำนวนยางทั้งหมด 12 เส้น พร้อมยางอะไหล่ 1 เส้น ขนาด 14.00-25
- ห้องขับเครนล่างแบบหัวเต็มรุ่นใหม่พวงมาลัยซ้าย ที่นั่งผู้ควบคุมรถแบบปรับระดับ และความนุ่มนวลตามน้ำหนักของผู้นั่งพร้อมอุปกรณ์อำนวยความสะดวก เช่น เครื่องปรับอากาศ, พวงมาลัยปรับสูงต่ำ, ม่านบังแดด และมาตรวัดตามมาตรฐานสากลบังคับเพลิง พร้อมจอแสดงภาพจากกล้องท้ายรถเครนเพื่อความสะดวกเวลาถอยรถ
- ไชเรนที่หัวเก๋ง
- ขาเครนแบบไฮดรอลิก 4 ขา ขาหน้าแบบสวิงกางปีกออก พร้อมเก็บพับเข้าข้างลำตัวคัทซี แข็งแรงและทนทาน ขาหลัง 2 ตอนแบบยืดออก เมื่อกางขาทั้งหมดแล้วได้ระยะขายึดซ้ายถึงขวา 7.9 เมตร หน้าถึงหลัง 8.075 เมตร ยกทำงานได้รอบตัว 360 องศา โดยไม่ต้องมีขาหน้า
- เครื่องยนต์ Weichai รุ่น WP12.375 N เทคโนโลยี Deutz จากประเทศเยอรมัน ขนาด 375 แรงม้า มาตรฐานยูโร 3 ให้แรงบิดสูง อัตราการสิ้นเปลืองน้ำมัน ประมาณ 45 ลิตร/100 กิโลเมตร
- เกียร์ EATON 10 เกียร์เดินหน้า , 1 เกียร์ถอยหลัง
- ความเร็วสูงสุด 80 กิโลเมตร/ชั่วโมง

ชุดเครนบน

- ห้องบังคับเครนรุ่นใหม่ทันสมัยเยี่ยม, กระจกเซฟตี้ ปลอดภัยและสะดวกสบาย
- ประตูเปิดปิดแบบบานเลื่อน กว้างขวางขึ้นลงสะดวกสบาย
- ชุดควบคุมคอนโทรล แบบจอยสติ๊ก นุ่มนวล ปลอดภัย และทำงานยกควบคุมได้ละเอียดกว่าแบบก้านโยก พร้อมสวิทช์ระบบควบคุมความปลอดภัย ในกรณีพลังเหลือ ไปโดนจอยสติ๊ก จะไม่ทำงาน พร้อมสวิทช์ควบคุมต่างๆใช้งานง่าย เช่นปุ่มตัดระบบฉุกเฉิน ,ปุ่มสตาร์ททำงานที่ป้อมบน, วิทยุ, มิเตอร์ชั่วโมงการทำงาน, ถังดับเพลิง
- พร้อมเครื่องปรับอากาศ ,ไฟสามสี เพื่อบอกสถานะการทำงาน ,
- ระบบ SAFETY LMI ของ PAT Hirschmann จอแสดงผลการทำงานเป็นจอสี LCD ขนาดใหญ่ ใช้งานง่าย แสดงผลการทำงาน โดยแสดงผลการทำงานการยก เช่น เบอร์เซ็นต์โมเมนต์, น้ำหนักที่ยกจริง, น้ำหนักที่ยกได้, รัศมีการทำงาน, ความยาวบูมที่ยืดออก, องศาบูม, ระยะยกสูงสุด, จำนวนทคสลิง และอื่น ๆ พร้อมรูปภาพฟีด สัญญลักษณ์ และมีระบบตัดการทำงานเมื่อยกน้ำหนักเกิน ระบบป้องกันการปล่อยสลิงเกิน และระบบป้องกันการยกตะขอชนจานรอกบน พร้อมจอแสดงภาพจากกล้องติดท้ายเครนเพื่อคูโลนสลิง
- เคาเตอร์เวท 4 ชั้น แยกเป็น
 - ขนาด 2.2 ตัน แบบยึดติดกับรถ
 - ขนาด 1.2 ตัน ขนาด 3.5 ตัน และขนาด 4.5 ตัน แบบแยกประกอบถ้าประกอบรวมทั้งหมดหนักรวม 11.5 ตัน การประกอบใช้ระบบไฮดรอลิกพร้อมสายรีโมทคอนโทรล ง่ายและรวดเร็ว
- **บริการหลังการขายและอะไหล่โดย บมจ.ชุกไ**



徐工集团

XCT80 automobile crane
product introduction

XCMG
July 2012

Introduction of XCT80 crane

XCT80 is the fourth generation K serial automobile crane, based on the mature technology of K serial has been developed for 10 years. Referencing the latest technology of automobile crane and all terrain crane, involving with the advanced scientific achievement in the engine, axles, material industry. Resolving the problems fed back from the market, fully investigating the need of customers.

XCT80 features in the 4 axles chassis, 5 section U shape hoisting boom and 2 jib. Concealed double independent winch, external gearing slewing mechanism and combined counter weight and Open loop system. The main pump is variable displacement pump and the auxiliary pump is constant displacement pump. Variable displacement motor is used for the hoisting mechanism and constant displacement motor is used for the slewing mechanism. Load sensitive system improves the working efficiency. Computer integrated control technology supports multiple working condition inspection. All-Molding hood, curved surface design is used for the casing molding. Integrated big Control board make the operator much more comfortable. The range of work condition is big and the hoisting capacity is powerful as well as high convenience, security and reliability.

(1)The diverse configuration for the whole machine providing more option for the customers

Providing diverse configuration scheme for the customers. Jib, sub winch, the weight of counter weight, mobile counter weight, delivery of extra counter weight as well as the configuration of chassis and engine are optional for customers .

(2)Advanced hoisting boom system

5 section telescopic boom, optimized u-shape cross section, high strength steel plate and the hoisting performance are on top of the domestic industry. Embedded boom head reduces the possibility of twisting and curving, as well as the point contract or line contract between the slider and boom.

(3)Self-developed full load sensitive technology with smooth control and nice

inching

The mature application of load sensitive filter technology guarantees the system is unaffected by the change of load pressure and oil pump flow, which satisfying the speed-adjusting requirement, making the system controllable, lowering the consumption of the hydraulic system, reducing the generated heat and extending the service life.

(4) new hydraulic motor pressure cutoff delaying technology guarantees the secondary hoisting sliding-free.

pressure cutoff delaying technology guarantees the jitter free at the critical point extending the service life of component. The configuration of Balanced valve is world-leading with excellent locking performance.

(5) the application of unique slewing buffering technology make the slewing system operation stable and jitter-free.

Specially designed Valve rod make the control of flow and pressure much more precise, which making the motion smooth and the slewing operation stable.

(6) Exclusive telescopic technology improving the telescopic system safety

National patent telescopic control technology extends or retracts the boom as regulated sequence, avoiding the cylinder bending and breaking off due to the misoperation. National patent antibending technology for the telescopic cylinder avoids the bend of core tube. The balancing valve core of telescopic cylinder avoids the leakage and prevents the retraction of cylinder.

(7) Self-developed pilot control system with stable controlling pressure integrates multiple control function.

Compact structure, integrated multiple controlling function. safety solenoid valve and protective solenoid valve are used to cut off the low pressure circuit to discharge the load. national patent winch brake starting-control mode

guarantees the nice matching of break starting time and balanced valve starting time with stable motion, nice inching and Jitter Free

(8)Rubber suspension and V-shape pull rod

The Rubber suspension and V-shape pull rod increases the transverse orientation of the axle resolving the malposition of middle-real axles. Extra four damper make the machine smooth, light weight and maintenance free.

(9)Air pressure disc brake for front axle

Improving the brake performance, reinforcing the brake stability , lightening the brake noise. High reliability, making the brake of front axle more secure, high sensitivity , easy maintenance, low maintenance cost.

(10)Double working condition mode engine, saving the fuel with maximum possibility

(11)load limit device with digital bussing technology, high antijamming capacity and low failure rate

XCT80 Truck Crane Technical specification

all terrain crane: XCT80

max rated lifting capacity : 80t

一、 carrier of all terrain crane

1、 carrier

luxury, spacious cab designed and manufactured by XCMG,



4 axils, driving mode: 8×4

1.1、 carrier

design and manufactured by XCMG, Full coverage platform with optimized structure, anti-twist box shape structure with high strength material

1.2、 engine

Manufacturer : Chinese Weichai, Chinese Zhongqi

Model : WP12.375N、 MC11.39-30

Type : inline-six engine 、 water cooled 、 inter-cooling 、 direct fuel injection 、 diesel engine

Emission standard : Europe III

1.3、 power transmission system

1.3.1 transmission

EATON 10 gears manual gearbox

1.3.2 axles

high strength and reliability

1st axles:single tyre, steeling axles

2nd axles:single tyre, steeling axles

3rd axles:double tyre, driving axles, one stage main reduction plus one stage hub reduction.

4th axles:double tyre, driving axles, one stage main reduction plus one stage hub reduction.

1.3. drive shaft

Flange are configured for the cross-head universal joint, optimizing the force transmission and convenient for disassembly and installation

1.4、 suspension

Spring suspension for the front axle, rubber spring suspension and V-shape trust rod for middle and rear axles, optimizing the horizontal positioning of axles and resolving the mismatch problem of middle and rear axles thoroughly

1.5、steering

Mechanical steering mechanism with hydraulic power, emergent steering system was added

1.6、tire

14.00R25 for the front axle,12.00R24 for the rear axle

1.7、braking

Service brake: double circuit air pressure braking driven by foot pedal, the first circuit acting on the 1st,2nd axles and the second circuit acting on the 3rd,4th axles

Parking brake: acting on the 3rd,4th axles

Auxiliary brake: exhaust brake

1.8、cab

The spacious cab with composite structure is well sealed and anti-corrosion, a fully enclosed Shockproof structure make the operator much more comfortable . the configuration of cab includes:security glass,3 wiper, rearview mirror with good view ,electrically-controlled wiper washer, air heater with Defrost windshield , single-refrigerator air-condition, radio, adjustable aero seat. the steering wheel can be used to adjust the height and angle

1.9、hydraulic system

Variable displacement pump is linked with engine by transmission and PTO, controlling the telescope of outrigger and powering the hoisting operation. The outrigger hydraulic system is electrically controlled open-loop gear pump. Controlled by the cylinder switch solenoid valve :

1. the swing control of front outrigger, the telescope control of rear outrigger

2. the improvement of outrigger arrangement increases the efficiency by 30%

1.10、hydraulic outrigger

Swing Front outrigger and level outrigger,4 point support ,full hydraulic control, the control console is arranged at the two sides of carrier.

Gradienter is used to level the machine. The foot of outrigger is reserved under the outrigger with spherical hinge. The outrigger is designed to lift the machine

for the purpose of making the machine working better under all kinds of working conditions.

1.11、electric equipment

24v DC, negative coil tower, 2 battery, headlamp, fog light, backup lamp

1.12、tool

A set of maintenance tool

二、upper part of machine

2.1 slewing bearing

3 rows Roller-type slewing bearing is used to connect the upper part and the carrier, 360 degree continuous rotation, waterproof and dustproof roller track sealing

2.2 turntable

Self developed, box-shape frame structure with high strength and high welding quality achieved by robot welding

2.3 hydraulic system

Open-looped Hydraulic driven is used for the whole machine, constant displacement pump and variable displacement pump are optional, pilot proportional control is used for the hydraulic system of upper part. Variable displacement motor is used for the main hoisting system. Constant power control can realize the heavy duty-low speed or light duty-high speed. Hydraulic proportional control is used for the load feedback multiple-way directional control system. Load sensitive proportional multiple-way directional valve is used as main control valve. The angle of oil-distributor pair can be adjusted by Load feedback when the pressure difference between the pressure of pump outlet and the load pressure changes, which leads the change of pump displacement. Constant power control of variable displacement pump automatically adjust the pressure and flow of pump to the optimum , which improve the control performance and energy efficiency significantly.

Tha capacity of hydraulic oil tank: 900L

2.4 radiator

Oil cooler and hydraulic system is installed in series, which extends the lifetime of hydraulic oil and hydraulic component

2.5 electric system

The load limit device, height limiter, plug-pin device of outrigger and gradienter are installed, the illuminating device make the night operation convenient

2.6 main hoisting mechanism

Planetary gear reducer driven by hydraulic motor and special winch drum with regularly closed brake inside, winding resistance wire rope, individually

operation.

Diameter of wire rope is 20mm, the length is 235m.

2.7 sub hoisting mechanism

Detachable sub hoisting mechanism, Planetary gear reducer driven by hydraulic motor and special winch drum with regularly closed brake inside, winding resistance wire rope, individually operation.

Diameter of wire rope is 20mm, the length is 14m.

2.8 jib lubbing mechanism

A double-acting cylinder with balanced valve

Angle Range : $-1^{\circ} \sim 79^{\circ}$

2.9 slewing mechanism

Driven by Constant displacement motor, special reducer with high quality and compact structure, regularly closed brake, external gearing driving the upper part slewing powerfully with automatic slip function and stepless speed regulation

2.10 boom

Anti-distortion designed Telescopic boom with high strength steel, consists of 1 base boom and 4 telescopic boom, the U shape arc of cross-section features the boom highly stable, upper slider supporting the main boom is adjustable. Sequential and synchro telescope of The main boom can be realized by the double reciprocating cylinder and wire rope arrangement. Arbitrary length of the boom is available. The biggest hoisting capacity is 80t.

2.11 cab

New style steel cab with good sealing and anti-corrosion, safe and comfortable, the configuration includes foreground window without blind spot, safe glass, sunshade on the window , pull-push door, seat back with tilt positioning function. Joystick is arranged on both sides of the seat. Pull-push pedal, wiper is arranged on the front window and top window, standard control parts and indicator are arranged according to ergonomics

2.12 hood

Full coverage and holistic designed hood with beautiful profile protects the hydraulic system and electric system efficiently and improve the service life significantly.

2.13 Air conditioner

Independent air conditioner is arranged on the upper part of the machine, locating in the hood. The specially designed maintenance window makes the maintenance convenient.

The air conditioner system is consist of evaporator, condenser, compressor, liquid receiver and pipe. the hydraulic motor is driven by Surplus power of hydraulic system and then transmit the power to the compressor by coupling. The power of the air conditioner is supplied by the vehicle power, the component of the system is good quality with stable performance

2.14 Safety device

Hydraulic system : balanced valve, relief valve, reversible lock are used to make the hydraulic system stable and safe.

Xuzhou Hirschman safety control system feature on the advanced micro operation technology, embedded operating system with the character of low consumption , powerful function, high sensitivity and easy operation. the operation parameter, such as Moment percentage, practical load, rated load ,amplitude , length of boom ,angle , the limit of hoisting height, ratio, limit angle and information mode can be displayed by Chinese characters and diagram on the LCD. Early-warming, overload warming and the overload control can prevent the danger during the operation efficiently. Unique angle limit function with overload memory make the operation under complicated condition much more reliable.

Hirschman safety control system includes display, central controller, length /angle sensor, hoisting limit switch, oil pressure sensor

Limit switch makes the roller keep three ring wire rope.

Height limit switch make the hoisting height in a safe range

2.15 Counter weight

Combined and balanced counter weight, total weight is 11.5t.

2.16 Jib

Manufactured by High strength steel, side directional unfolding installation . the jib can be attached on the side of boom during traveling.

The jib is optimized, the length of first section is 10.5m, the total length of jib is 17.5m.

2.17 Hook

Item	Main hook	Medium hook	Auxiliary hook
Rated capacity	80t	40t	7t
Self weight	1000kg	560kg	250kg
Quantity	1	1	1

三、color

The color of the whole machine:

The frame and hub: black

Cab, upper part of the machine and boom: yellow

3. the traveling parameters of XCT80

1、travelling parameters

subject to the technology innovation

Category	Item		Unit	Parameter		
				XCT80		
Size	The whole length		mm	14770		
	The whole width		mm	2800		
	The whole height		mm	3890		
	Wheel Base	The first wheel base		mm	1470	
		The second wheel base		mm	4000	
		The third wheel base		mm	1350	
	Wheel Span	Front wheel Span		mm	2380	
Rear wheel span		mm	2075			
Weight Parameter	Self weight		kg	50000		
	Axle Load	1, 2 axles		kg	24000	
		3, 4 axles		kg	26000	
Power Parameter	Engine mode			WP12. 37 5N	MC11. 39- 30	
	Engine rated power		kW/ (r/min)	276/190 0	290/1900	
Traveling Parameter	Speed	High speed		km/h	80	
		Low speed		km/h	3	
	Turning diameter	Minimum turning diameter		m	24	
		Turning diameter of boom head		m	29	
	Minimum ground clearance		mm	302		
	Approach angle		°	17		
	Departure angle		°	15		
	Brake distance (speed is 30km/h)		m	≤10		
	Gradeability		%	40		
	Fuel consumption for 100km		l	45		

2、operation parameter

Category	Item		Unit	Parameter	
Performance Parameter	Max rated lifting capacity		t	80	
	Min rated working radius		m	3	
	Turning radius at turntable tail		mm	4670	
	Max lifting Torque	Base boom	kN. m	3060	
		Fully extended boom	kN. m	1392	
	Outrigger Span	Longitudinal span	m	8.075	
		Lateral span	m	7.9	
	Lifting height	Base boom	m	12.8	
		Fully extended boom	m	47.5	
		Fully extended boom + jib	m	64	
	Length of boom	Base boom	m	12.4	
Fully extended boom		m	47.5		
Fully extended boom + jib		m	65		
Installing angle of jib		°	0、15、30		
Velocity Parameter	Boom luffing time	Lifting	s	70	
		Falling	s	140	
	Boom extension time	Fully extension	s	140	
	Max slewing speed		r/min	2.0	
	Outrigger extension Time	Level outrigger	Extension synchronously	s	50
			Retraction synchronously	s	40
		Horizontal Outrigger	Extension synchronously	s	50
			Retraction synchronously	s	40
		Full load	m/min	85	

	Lifting speed (single rope)	Main lifting Mechanism	Empty load	m/min	130
		Sub lifting Mechanism	Full load	m/min	85
			Empty load	m/min	110
	Noise outside			dB(A)	≤122
	Noise inside			dB(A)	≤90

3、lifting capacity of XCT80

Full extension of outrigger 7.9m, counter weight 11.5t, unit t、°、m																											
Luffing	12.4			16.79			21.17			25.56			29.95			34.34			38.72			43.11			47.5		
	Load	Elevation Angle	Height	L	Elevation Angle	Height	Load	Elevation Angle	Height	Load	Elevation Angle	Height	Load	Elevation Angle	Height	Load	Elevation Angle	Height	Load	Elevation Angle	Height	Load	Elevation Angle	Height			
3	80	67.8	12.8	65	74.4	17.5																					
3.5	75	65.2	12.5	63	72.6	17.3	45	77	22																		
4	68	62.5	12.2	61	70.7	17.1	45	75.3	21.8																		
5	58	56.9	11.5	54	67	16.7	43	72.5	21.5	38	76.1	26.1	32	78.7	30.7												
6	51	50.8	10.7	47	63.1	16.1	38	69.5	21	35	73.7	25.8	30	76.7	30.4	24.5	78.9	35									
7	43.5	44.1	9.6	42	59	15.5	34.5	66.6	20.6	32	71.3	25.4	28	74.7	30.1	22.5	77.2	34.7									
8	37	36.2	8.2	36	54.8	14.7	31.6	63.5	20	28	68.9	25	25.5	72.6	29.7	20	75.4	34.4	17.9	77.6	39						
9	30.5	25.9	6.2	22	50.2	13.9	28.2	60.3	19.4	26.5	66.4	24.5	23.8	70.6	29.3	18.9	73.7	34	16.9	76.1	38.7						

Performance chart of jib for XCT80

Rated performance of jib (counter weight 11.5t、full extension 7.9m) unit t						
Boom Elevation Angle	47.5m+10.5m			47.5m+17.5m		
	0	15	30	0	15	30
	Load	Load	Load	Load	Load	Load
78	6.3	4.4	4.2	3.7	2	1.6
75	5.8	4	3.7	3.2	1.6	1.4
72	5.1	3.7	3.5	2.7	1.4	1.3
70	4.7	3.5	3.4	2.5	1.3	1.3
65	3.9	3.2	3	1.9	1.2	1.1
60	2.8	2.6	2.5	1.7	1.1	1.1
55	2.1	1.9	1.8	1.4	1	0.9
50	1.2	1.1	1.1	1.1		
Weight of hook	250kg					
Notice 1: the load in the list is the max load that the machine can burden on the flat and solid ground 2: the rated weight in the list includes the weight of hook and hanger device						

Description:

- (1) the unit of boom length and luffing is m, the unit of weight is t.
- (2) the load capacity in the list includes the weight of hook and rigging
- (3) the machine can be under operation when the wind level is under force Beaufort 5