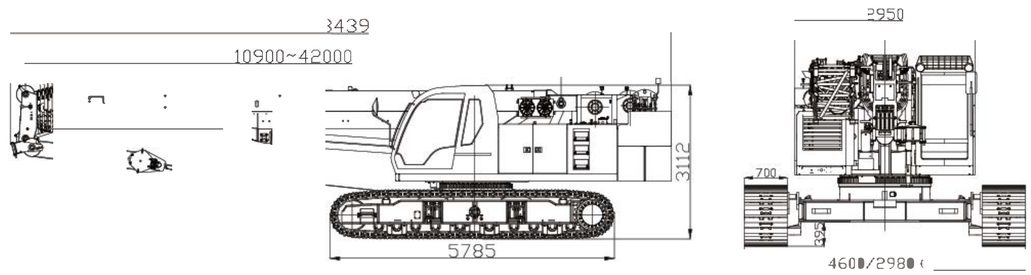
XGC40T
Telescopic Crawler Crane

CONTENTS

The Main Technical Parameters

Type	Items		Unit	Data
Dimension	Overall length		mm	13439
	Overall width (extension/retraction)		mm	4600/2980
	Overall height		mm	3112
	Central distance from drive roller to driven roller		mm	4882
	Track shoe width		mm	700
Weight	Total weight		t	48
Travel	Max. travel speed		km/h	3
	Min. clearance from the ground		mm	395
	Max. gradeability		%	45
Power	Ground pressure		MPa	0.069
	Ear noise		dB(A)	80
	Model		-	SC7H220.1G3
	Rated power		Kw	162
	Rated revolution speed		r/min	2000
	Emission standard		-	Non-road III stage 950
Capacity	Hydraulic oil tank		L	540
	Fuel tank		L	400
Main performance	Max. rated lifting weight		t	40
	Min. rated radius		m	3
	Max. lifting load moment		kN·m	1423
	Lifting height	Base boom	m	11.8
		Max. length boom	m	42.6
		Max. length boom + Jib	m	58.5
	Boom length	Main boom	m	10.9 ~ 42
		Jib	m	9.2/16
Working speed	Jib offset angle		°	0/15/30
	Boom raising time		s	40
	Boom full extension time		s	80
	Max. slewing speed		r/min	2.1
	Hoisting speed(no load at the 4th layer)		m/min	140

Pictures and data in this catalog will change with the update and modif cation of products, so please take the actual vehicle as reference.



Crane Superstructure

发动机 / Engine

配置上柴SC7H220.1G3发动机，非道路三阶段；
额定功率/转速：162Kw/2000rpm；

Shanghai diesel engine SC7H220.1G3, non-road III stage;
Rated power/revolution speed: 162Kw/2000rpm;

起升机构 / Hoist Gear

空载起升速度：0～140m/min	Empty load hoisting speed：0~140m/min
钢丝绳直径/长度：	Wire rope diameter/length:
主卷钢丝绳：φ18mm/180m	Main winch rope：φ18mm/180m
副卷钢丝绳：φ18mm/125m	Auxiliary winch rope：φ18mm/125m

变幅机构 / Luffing Gear

变幅机构描述：单缸前支变幅
主臂起臂时间：≤40s

luffing mechanism description： single cylinder front luffing
Main boom rising time :≤40s

电气控制系统 / Electric Control System

采用ECU控制器，脚油门，手油门，通过CAN实现对发动机转速的高效控制。
系统采用供电方式为DC24V。采用PLC可编程控制器作为控制系统的核心，系统由发动机控制、安全控制、先导控制、力矩限制器控制、辅助功能控制等几部分组成。通过显示器实时监测发动机水温、机油压力，当超过安全临界值时，蜂鸣器自动报警；同时，通过力限器对当前工况的分析，当吊重量、倒角或幅度任意一值超出安全范围时，三色报警灯和蜂鸣器会发出“声光报警”并通过程序控制，限制危险动作的行为。

Adopts ECU controller, foot throttle, and hand throttle to achieve efficient control of engine speed through the CAN.
The system adopts DC24V power supply. The PLC programmable controller is used as the core of the control system. The system is composed of engine control, safety control, pilot control, torque limiter control and auxiliary function control. Monitor the engine water temperature and oil pressure in real time through the display. When the safety threshold value is exceeded, the buzzer will automatically alarm. At the same time, the load moment limiter will analyze the current working condition, and when the lift weight, elevation angle or radius exceeds the safe range, three-color warning light and buzzer will send "acoustic and visual alarm", control and limit dangerous movement through program.

回转机构 / Slewing Gear

回转机构布置在转台右前端，由马达驱动。
行星减速机与回转支承外啮合进行回转，液压缓冲，具有自由滑转功能，保证作业安全。行星齿轮减速机具备常闭、片式制动器，工作可靠，维修方便。
回转支承：采用单排四点接触球式回转支承，承载能力强，保证回转作业安全、平稳。
回转速度：0～2.1r/min.

The slewing gear is arranged at the right front end of the turntable and is driven by a motor.
The planetary gear reducer rotates externally with the slewing ring and is hydraulic buffering; it has a free slip function to ensure operation safety. The planetary gear reducer has a normally closed, disc brake, reliable operation and easy maintenance.
Slewing bearing: single row four-point contact ball slewing bearing has strong bearing capacity and guarantees safe and stable slewing operation.
Slewing speed: 0~2.1r/min

液压系统 / Hydraulic System

液压比例阀控制，控制精准，微动性好，调速范围广。起重作业伸缩、变幅及起升液压系统与行驶作业液压系统共用一恒功率带负载敏感的A8V107双泵，回转系统和辅助系统分别由独立泵供油。
采用成熟可靠的液压元件，先进、高效的液压传动控制技术。操作简单，维修维护方便。与电气系统相配合，保证主机安全稳定。

Hydraulic proportional valve control, precise control, fine movement, wide speed range. Lifting operations, telescoping, luffing and hoisting hydraulic system shares a constant-power, load-sensitive A8V107 double pump with the hydraulic system of the travel operation. Slewing system and auxiliary system are supplied by independent pump.
The use of mature and reliable hydraulic components, advanced and efficient hydraulic transmission control technology. It is simple operation and easy maintenance. Cooperate with the electrical system to ensure the safety and stability of the crane.

Crane Carrier

下车包括车架、履带架、行走液压马达。车架和履带架采用插入式连接。
下车具有宽轨、窄轨两种工作状态。宽轨时起重性能高，窄轨时适用于狭小空间作业。

Undercarriage includes car-body, crawler tracks and travel device. It is insertion connection between car body and crawler tracks.
There are two working states: wide track gauge and narrow track gauge.
This crane is with high lifting performance in wide gauge mode and applies to the works in narrow and small spaces in narrow gauge mode.

履带伸缩 / Track Frame Extension/Retraction

将下车行走切换阀，切换到收缩状态，通过履带收缩油缸实现履带的扩张和收缩。方便转场及狭窄环境通过。

Switch undercarriage travel switch valve to retraction state: extend/retract crawler tracks through cylinder extension/retraction. It is convenient for transition and passing through narrow space.

行走装置 / Travel Gear

由行走马达、减速机、驱动轮来实现整机的直线行走及转弯。

Overall crane straight travel and turning is achieved through motor, reducer and drive rollers.

吊钩 / Hook Block

名称Name	40t吊钩Hook	4.5t吊钩Hook
重量Weight（kg）	400	93
数量Quantity	1	1

平衡重 / Counterweight

平衡重共12t，一块8.5t，2个1.75t。具有12t、8.5t、0t三种配重组合，分别对应不同起重性能。
为用户提供多样化选择，可降低运输成本，降低接地比压，适合在松软、泥泞场地施工。

Counterweight is totally 12t, with one 8.5t block and two 1.75t blocks. There are three counterweight combinations; they are 12t, 8.5t, 0t, corresponding to different lifting performance.
Provide diversified options for users, reduce transport cost and ground pressure, it is applicable to the construction on soft and muddy.

Safety Devices

安全装置包括急停开关、先导控制开关、力矩限制器、起升高度限制器、回转锁止装置、三圈保护器等。

Safety devices comprise:emergency stop switch、pilot control switch、load moment limiter、hoist limit switch、slewing locking device、rope-end limiter，etc.

急停开关 / Emergency Switch

按下急停开关，发动机熄火，整车动作停止。

Press down emergency switch, engine powers off, crane movement is stopped.

先导控制开关 / Pilot Control Switch

按下开关后，起重作业电气系统才能正常操作。

Press the switch, lifting working electrical system can be operated normally.

力矩限制器 / Load Moment Limiter

当吊重量大于额定起重量，吊臂仰角超出额定范围、或幅度超出额定范围时，力限器会发出信号，限制危险动作的继续进行。

When the lifted load is heavier than the rated load, boom angle exceeds the rated range or radius exceeds rated range, load moment limiter will send out a signal to restrict the dangerous movement.

起升高度限位器 / Height Limiter

当吊钩中心起升至吊臂滑轮重心约710mm时，起升动作自动停止。

When the hook center is hoisted to boom pulley gravity center about 710mm, hoisting movement stops automatically.

回转锁止机构 / Slewing Lock Mechanism

保证运输时转台有效锁止，防止其自由滑转。

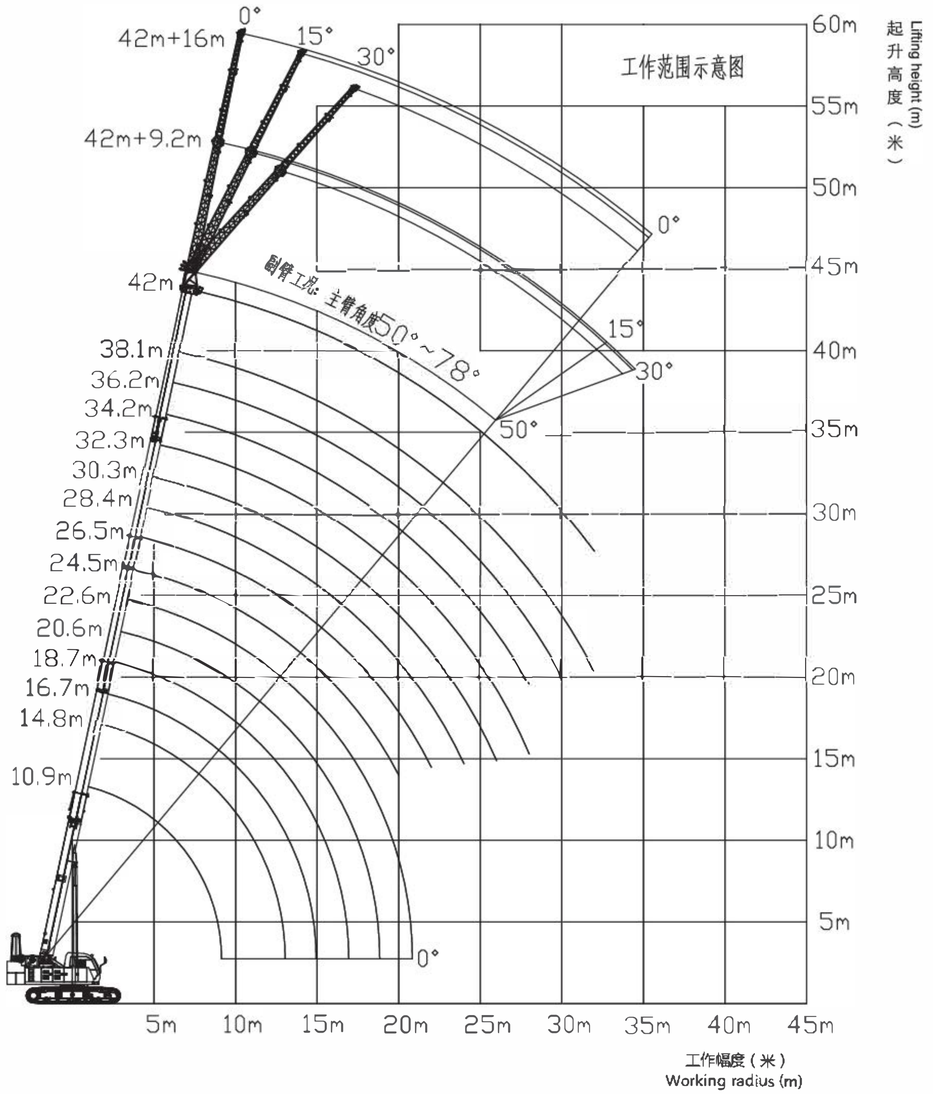
Guarantee turntable locking effectively during transport, prevent from free sliding.

三圈保护器 / Rope-end Limiter

当吊钩下降至卷扬钢丝绳剩余三至五圈时，吊钩自动停止。

When hook lower to 3-5 loops of ropes left on the drum, hook automatically stops lowering.

Working Area



注：部分臂长具有小角度起重性能，适合于在高度受限的工作场所施工，如厂房、仓库、隧道等内部作业。
Notes: some boom lengths has lifting performance in small angles, they are suitable for working in limited height space, such as workshops, storehouse and tunnels.

Boom Lifting Load Chart

XGC40T boom lifting load chart (12t counterweight, wide track gauge, static lifting)

Radius/boom length m	10.9	14.8	16.7	18.7	20.6	22.6	24.5	26.5	28.4	30.3	32.3	34.2	36.2	38.1	42.0
3	40.0														
3.5	35.0	34.0	17.0	26.5											
4	34.0	31.0	16.9	26.0	17.1	13.1									
4.5	31.0	29.0	16.8	25.0	16.7	12.9	19.0								
5	28.5	27.0	16.7	24.0	16.2	12.8	18.5	12.8							
5.5	26.4	24.5	16.4	22.8	15.8	12.7	17.5	12.6	9.5						
6	22.6	22.0	16.2	20.3	15.3	12.6	16.5	12.2	9.5	14.0					
7	17.3	17.0	14.4	16.4	14.4	11.7	15.0	11.5	9.0	12.8	8.8	6.6	9.5		
8	13.8	13.5	13.1	13.3	12.6	10.8	13.5	10.4	8.1	11.7	8.4	6.6	8.9	6.4	
9	11.2	11.0	11.1	10.8	10.8	9.9	11.5	9.9	7.7	10.9	7.9	6.2	8.4	6.2	7.0
10		9.3	9.4	8.9	9.0	9.0	9.7	8.8	7.2	9.8	7.0	5.8	7.8	5.9	6.3
12		6.3	6.9	6.3	6.6	7.4	7.0	7.0	5.9	7.4	6.2	5.1	6.8	5.2	5.8
14			5.3	4.6	4.9	5.7	5.2	5.4	5.4	5.7	5.3	4.4	5.8	4.6	5.1
16				3.0	3.8	4.5	4.0	4.2	4.5	4.4	4.4	4.0	4.6	4.0	4.6
18					2.9	3.6	3.0	3.3	3.9	3.4	3.5	3.5	3.7	3.5	3.7
20							2.1	2.6	3.2	2.6	2.8	3.1	2.9	3.0	3.1
22								2.1	2.6	2.0	2.3	2.6	2.3	2.4	2.5
24									2.1	1.4	1.8	2.2	1.9	2.0	2.0
26										1.0	1.4	1.9	1.5	1.6	1.5
28											1.1	1.5	1.1	1.3	1.2
30													0.7	1.0	0.9
32														0.7	0.7
Parts of line	8	8	5	7	5	5	5	4	3	4	3	2	3	2	2
40t hook	400kg														
二节臂 2-setion boom	0%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	100%
三节臂 3-section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%
四节臂 4-section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%
五节臂 5-section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%

XGC40T boom lifting load chart (12t counterweight, wide track gauge, min. stable travel speed)

Radius/boom length m	10.9	14.8	16.7	18.7	20.6	22.6	24.5
3	28.0						
3.5	24.0	22.1	10.5	17.2			
4	23.5	20.2	10.5	16.9	10.6	7.2	
4.5	21.5	18.9	10.4	16.3	10.3	7.1	9.5
5	20.0	17.6	10.4	15.6	10.0	7.0	9.3
5.5	18.5	15.9	10.2	14.1	9.8	7.0	8.8
6	15.8	14.3	10.0	12.6	9.5	6.9	8.3
7	12.1	11.1	8.9	10.2	8.9	6.4	7.5
8	9.0	8.8	8.1	8.3	7.8	5.9	6.7
9	7.5	7.1	6.9	6.7	6.7	5.4	5.7
10		6.0	5.8	5.5	5.6	5.0	4.9
12		4.1	4.3	3.9	4.1	4.0	3.5
14			3.3	2.9	3.1	3.1	2.6
16				1.9	2.3	2.5	2.0
18					1.8	2.0	1.5
倍率 parts of line	7	7	3	5	3	2	3
40t吊钩 hook	400kg						
二节臂 2-section boom	0%	50%	0%	100%	50%	0%	100%
三节臂 3-section boom	0%	0%	25%	0%	25%	50%	25%
四节臂 4-section boom	0%	0%	25%	0%	25%	50%	25%
五节臂 5-section boom	0%	0%	25%	0%	25%	50%	25%

Boom Single Pulley Lifting Load Chart

XGC40T boom single pulley lifting load chart (12t counterweight, wide track gauge, static lifting)

Radius/boom length m	10.9	14.8	16.7	18.7	20.6	22.6	24.5	26.5	28.4	30.3	32.3	34.2	36.2	38.1	42.0
3	4.0														
3.5	4.0	4.0	4.0	4.0											
4	4.0	4.0	4.0	4.0	4.0	4.0									
4.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0								
5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0							
5.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0						
6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0					
7	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		
8	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
10		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
12		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
14			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
16				3.0	3.8	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
18					2.9	3.6	3.0	3.3	3.9	3.4	3.5	3.5	3.7	3.5	3.7
20							2.1	2.6	3.2	2.6	2.8	3.1	2.9	3.0	3.1
22								2.1	2.6	2.0	2.3	2.6	2.3	2.4	2.5
24									2.1	1.4	1.8	2.2	1.9	2.0	2.0
26										1.0	1.4	1.9	1.5	1.6	1.5
28											1.1	1.5	1.1	1.3	1.2
30													0.7	1.0	0.9
32														0.7	0.7
倍率 parts of line	1														
4.5t hook	93kg														
二节臂 2-section boom	0%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	0%	100%	50%	100%
三节臂 3 section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%
四节臂 4-section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%
五节臂 5-section boom	0%	0%	25%	0%	25%	50%	25%	50%	75%	50%	75%	100%	75%	100%	100%

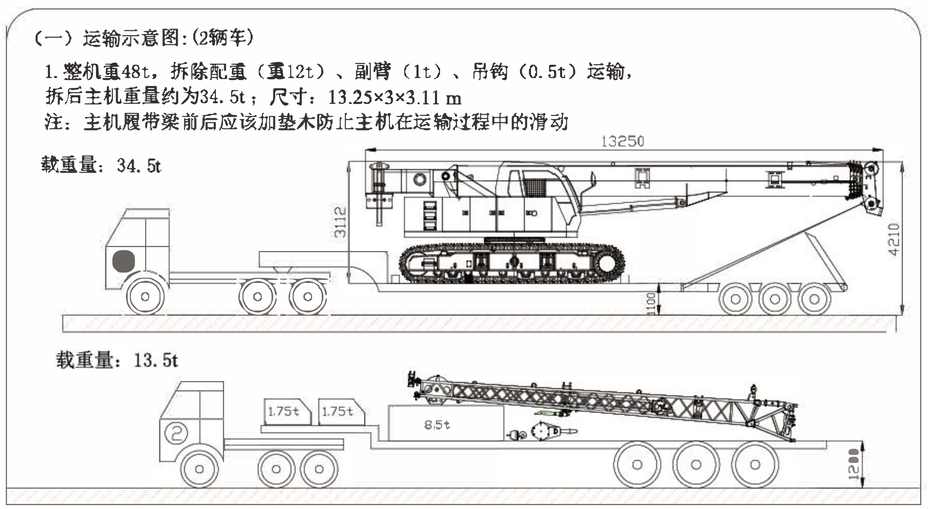
XGC40T jib lifting load chart (main boom 42m, 12t counterweight, wide track gauge, static lifting)

Jib length	9.2m			16m		
Boom angle/Jib offset angle°	0	15	30	0	15	30
78	4	2.5	2.1	2.1	1.4	1.1
75	3.5	2.2	2	2	1.2	1
72	3.2	2	1.9	1.8	1.1	0.9
70	3	1.9	1.8	1.7	1	0.8
65	2.5	1.8	1.7	1.4	0.8	0.7
60	1.5	1.2	1.1	1	0.7	0.6
55	0.9	0.8	0.7	0.6	0.5	0.4
50	0.5	0.5	0.4			
Parts of line	1					
4.5t hook	93kg					

Transport Planning

Plan 1: overall crane dismantling transport

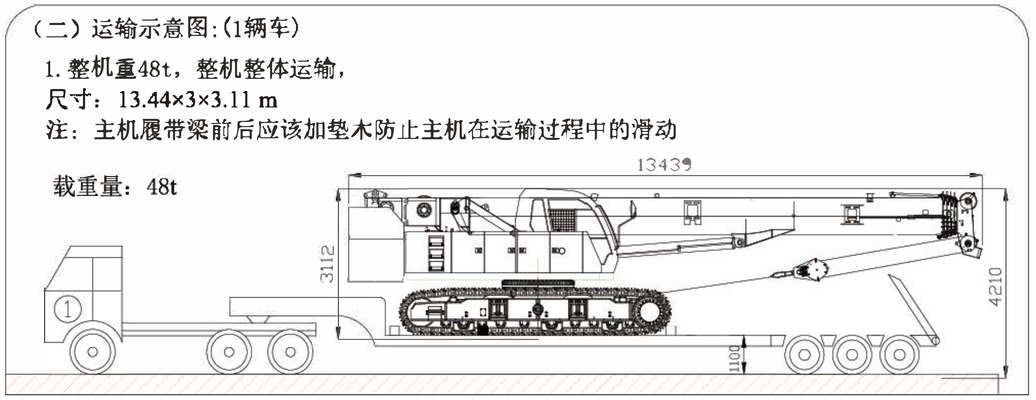
Transport after removing away counterweights, jib, etc, 2 vehicles, see the following figure.



Transport Planning

Plane 2: overall crane integrated transport:

One vehicle is need when overall crane is integrated transported, see the following figure:



Notes: 1. the above parameters are theoretical design values, due to the unavoidable differences in the manufacturing process of the product, plus the continuous
improvement of the product, the specification and weight of some parts will be slightly different. The above data is for reference only.

2. Transport vehicle information is for reference only

3. The basic crane (parts) must be firmly fixed during transportation.