# QY25K5H_1汽车起重机 / Truck Crane

## 技术规格书
## Technical specifications

25 t　41 m　47.4 m


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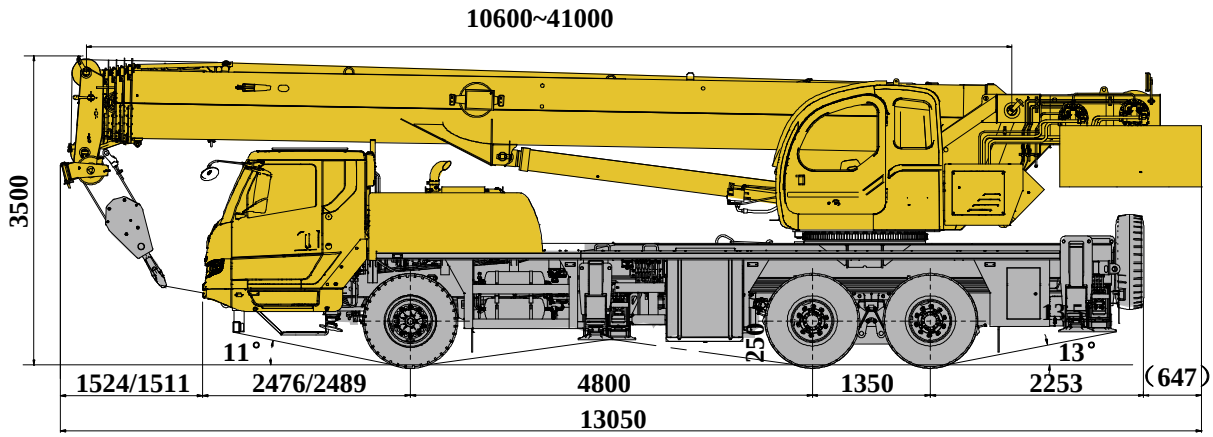
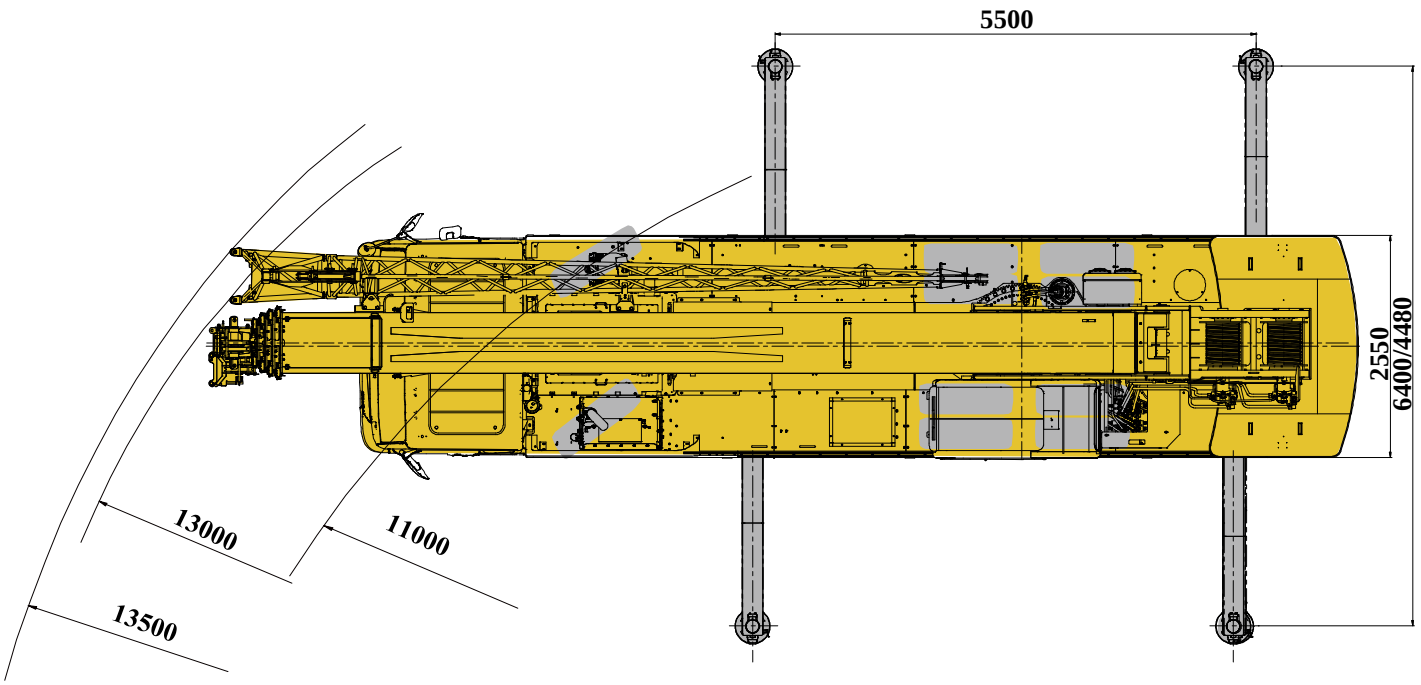



备注：当配置齐星驾驶室时，前伸:1511mm，前悬为2489mm；当配置徐工汽车驾驶室时，前伸:1524mm, 前悬为2476mm。

Notes:

Front extension: 1511 mm, front overhang: 2489 mm (when equipped with Qixing driver's cab);

Front extension: 1524 mm, front overhang: 2476 mm (when equipped with XCMG Automobile driver's cab).

# 技术规格
# Technical specifications

## 底盘

| | |
|---|---|
| 车架 | 徐工设计、制造，全覆盖式走台板，防扭转箱型结构，高强度钢材制造。 |
| 支腿 | 4支腿；纵向H形布置，操作杆控制液压动作；可由底盘任一侧同时或单独控制各支腿的动作，设有水平仪；带第五支腿；且垂直支腿带有液压双向锁。<br>支脚盘尺寸：φ400mm<br>最大起重量时支腿反力：323KN |
| 发动机 | SC9DF290Q5，直列六缸水冷电控柴油发动机，上柴，额定功率213kW/2200rpm，最大扭矩1200N.m/1400rpm，最大净功率211kW/2200rpm；<br>最大基准扭矩：1200N.m；欧五排放标准。<br>燃油箱容积：360L，尿素箱容积：35L。 |
| 变速箱 | 法士特8档变速箱，机械操纵，带同步器。 |
| 车桥 | 高强度车桥，2,3桥驱动。 |
| 悬挂 | 前悬架：纵置钢板弹簧，筒式减震器；<br>后悬架：橡胶悬架，重量轻，免维护。 |
| 轮胎 | 10个轮胎，1个备胎，前桥装单胎，中桥、后桥装双胎。<br>轮胎规格：315/80R22.5（一轴）<br>12R22.5（二、三轴） |
| 制动 | 行车制动：双回路气压制动，作用于所有车轮。<br>驻车制动：弹簧贮能制动，作用于2-3轴车轮。<br>辅助制动：发动机排气制动。 |
| 转向 | 机械式转向机构，带有液压助力 |
| 驾驶室 | 全宽驾驶室，乘员2人；配置可调式座椅、方向盘、安全玻璃、3只雨刷器、电动门窗升降器、杂物箱、冷暖空调。 |
| 电气系统 | 直流24伏特，串联12伏特的电池组2个； |

## 上车

| | |
|---|---|
| 结构 | 徐工设计、制造，高强度钢材制造。 |
| 液压系统 | 底盘发动机驱动定量齿轮泵，用于起升、变幅、伸缩。负载敏感式比例多路换向阀，带有抗冲击阀、防气蚀阀；风冷式液压油散热器；<br>液压油箱容积：420L |
| 操纵方式 | 液控先导操纵系统，由左右2个操纵手柄控制由液压泵和比例阀进行液压先导式控制起重机的全部动作。 |
| 主起升机构 | 液压控制调速，装有双折线绳槽卷筒，由液压马达通过行星齿轮减速器驱动，内置常闭式制动器并带有平衡阀。 |
| 副起升机构 | 液压控制调速，装有双折线绳槽卷筒，由液压马达通过行星齿轮减速器驱动，内置常闭式制动器并带有平衡阀。 |
| 回转机构 | 四点接触球式回转支承，由液压马达驱动行星齿轮回转机构减速器驱动，可连续回转360°；具有动力控制或自由回转的功能，可无级调速；回转杆设有鸣响开关。 |
| 变幅机构 | 单支双作用前置液压变幅油缸，带有平衡阀。 |
| 操纵室 | 新型钢制操纵室，装有无视野死角的前景窗，安全玻璃，车窗装有遮阳板，外开式车门，座椅靠背可倾斜定位，操纵杆安装在座椅两侧的扶手台上；前窗顶窗装有雨刮器；标配单冷空调。 |
| 安全装置 | 液压平衡阀；液压溢流阀；液压双向锁；力矩限制器；三圈保护器，防止钢丝绳过放；臂头设置高度限位，防止钢丝绳过卷。 |

# 技术规格
# Technical specifications

## 臂架系统

| | |
|---|---|
| **主臂** | 5节，“U”形截面的筒形焊接结构。单缸绳排伸缩机构<br>主臂长度：10.6m～41m。 |
| **臂端单滑轮** | 单滑轮, 安装在主臂顶端用于单股钢丝绳起重作业，最大起重量不超过3t |
| **固定副臂** | 1节桁架式焊接结构，固定副臂长度：8.3m |

# 技术规格
# Technical specifications

## Chassis

| | |
|---|---|
| **Frame** | Designed and manufactured by XCMG, is made of high-strength steel with fully-covered walking surface and anti-torsion box-typed structure. |
| **Outriggers** | Four outriggers arranged in H-shape are hydraulically controlled by control levers. There is an outrigger control station located at each side of the chassis, and there is a level gauge on each control station. The outrigger movements can be simultaneously or separately controlled on either side of the chassis. The 5th jack is equipped. There is a double-way hydraulic lock fitted in each jack cylinder.<br>Outrigger float diameter: φ400 mm<br>Reaction force of outrigger at maximum lifting load: 323 KN |
| **Engine** | SC9DF290Q5, in-line, 6-cylinder, water cooled, electric control diesel engine, made by Shanghai Diesel Engine, with rated power of 213kW/2200 rpm, maximum torque of 1200N.m/1400 rpm, maximum net power of 211kW/2200 rpm;<br>Maximum engine reference torque can reach 1200N.m, compliant with Europe V emission standard.<br>Fuel tank capacity: 360 L;<br>AdBlue/DEF tank capacity: 35 L. |
| **Transmi-ssion** | FAST mechanical control, 8 speed transmission with synchronizers |
| **Axles** | High strength axles, 2nd axle and 3rd axle for driving. |
| **Suspen-sion** | Front suspension: longitudinal leaf spring balanced suspension, with cylindrical shock absorber.<br>Rear suspension: rubber suspension, light dead weight and maintenance-free. |
| **Tires** | 10 tires and 1 spare tire. The front axle is equipped with single tire, the middle and rear axles are equipped with double-tire.<br>Tire specifications: 315/80R22.5 (axle 1).<br>12R22.5 (axles 2 and 3) |
| **Braking system** | Service brake: dual-circuit air pressure brake acting on all wheels.<br>Parking brake: spring applied brake, acting on the wheels of axles 2~3.<br>Auxiliary brake: engine exhaust brake. |
| **Steering system** | Mechanically steering mechanism with a hydraulic booster. |
| **Driver's cab** | Full-dimension cab, 2-man design. It is equipped with adjustable seats, steering wheel, safety glass, 3 wipers, electrically operated door window lifters, glove box and HVAC system. |
| **Electrical system** | 24 V DC, two sets of 12 V battery in series. |

## Superstructure

| | |
|---|---|
| **Structure** | Designed and manufactured by XCMG, made of high strength steel. |
| **Hydraulic system** | The chassis engine drives the constant displacement gear pump to realize hoisting, luffing and telescoping operations. Load sensing proportional multi-way change valve with impact resistance valve and cavitation-proof valve integrated; air-cooled hydraulic oil radiator.<br>Hydraulic tank capacity: 420 L. |
| **Control system** | Pilot hydraulic control is used for controlling the superstructure. All crane movements are controlled by hydraulic pump and proportional valve through two control levers at left and right sides. |
| **Main winch** | Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake, a counterbalance valve and a grooved drum equipped. |
| **Auxiliary winch** | Hydraulic control is used for speed regulation. The system is driven by a hydraulic motor through a planetary gear reducer, with a normally closed brake, a counterbalance valve and a grooved drum equipped. |
| **Slewing system** | Four-point contact-ball slewing ring is driven by the planetary gear reducer of slewing mechanism, which is driven by a hydraulic motor, and may continuously slew 360°. Power control and free slewing function as well as stepless speed regulation are available. There is a horn switch fitted on the slewing control lever. |
| **Luffing system** | A front support dual-acting hydraulic cylinder is equipped for luffing operation, with a counterbalance valve fitted. |
| **Operator's cab** | New steel cab with a full-view windshield, safety glass, sun shield and adjustable operator's seat. Windshield wiper and roof window wiper are fitted. Crane control levers are integrated into armrests. An outward-open door is designed for access to the cab. air conditioning is equipped as a standard. |
| **Safety devices** | Hydraulic counterbalance valve, hydraulic relief valve, double-way hydraulic lock, LMI, lowering limiter for preventing wire rope from over-releasing, and anti-two block at boom head for preventing wire rope from over-winding. |

# 技术规格
# Technical specifications

|  | **Boom and jib system** |
|---|---|
| **Boom** | 5-section boom with U cross-section, welding structure. Single-cylinder plus ropes telescoping system<br>Boom length: 10.6 m～41 m. |
| **Auxiliary sheave** | Fitted at boom head, used for single line operation. The maximum lifting load is no more than 3 t. |
| **Fixed jib** | One section lattice jib, welded structure.<br>Fixed jib length: 8.3 m. |

## 车型与选装件
## Configuration and optional equipment

| 车型<br>Configuration | 功能描述<br>Function description | 选择<br>Selection |
|---|---|---|
| 标准型<br>Standard | 五节主臂41m<br>5-section boom of 41 m | |

注释：该产品仅标准型一种车型。

Note: only standard configuration is available for this model.

| 可选装件<br>Optional equipment | 选择<br>Selection |
|---|---|
| 卷扬监视系统 Winch monitoring system | |
| 风速仪 Anemometer | |
| 回转报警灯 Slewing beacon light | |
| 角度指示器 Angle indicator | |
| 倒车影像 Backup camera | |
| 冷暖空调（操纵室） HVAC（Operator’s cab） | |
| 排气管防火帽 Exhaust pipe spark arrestor | |
| 支腿测长传感器 Outriggers length sensor | |
| 旋转报警灯（驾驶室） Rotary beacon light (Driver’s cab) | |
| ABS 防抱死制动系统 Anti-lock brake system (ABS) | |

## 重量
## Weights

| 车桥<br>Axle | 1 | 2 | 3 | 总重量<br>Total weight |
|---|---|---|---|---|
| t | 6.8 | 12.25 | 12.25 | 31.3 |

| 吊钩<br>Hook block | 倍率<br>Parts of line | 吊钩重量<br>Weight (kg) | 吊钩尺寸<br>Dimensions (mm) | 备注<br>Remarks |
|---|---|---|---|---|
| 25 t | 8 | 260 | 353×390×1202 | 单钩 Single-hook |
| 3 t | 1 | 60 | 236×236×518 | 单钩 Single-hook |

## 作业速度
## Working speeds

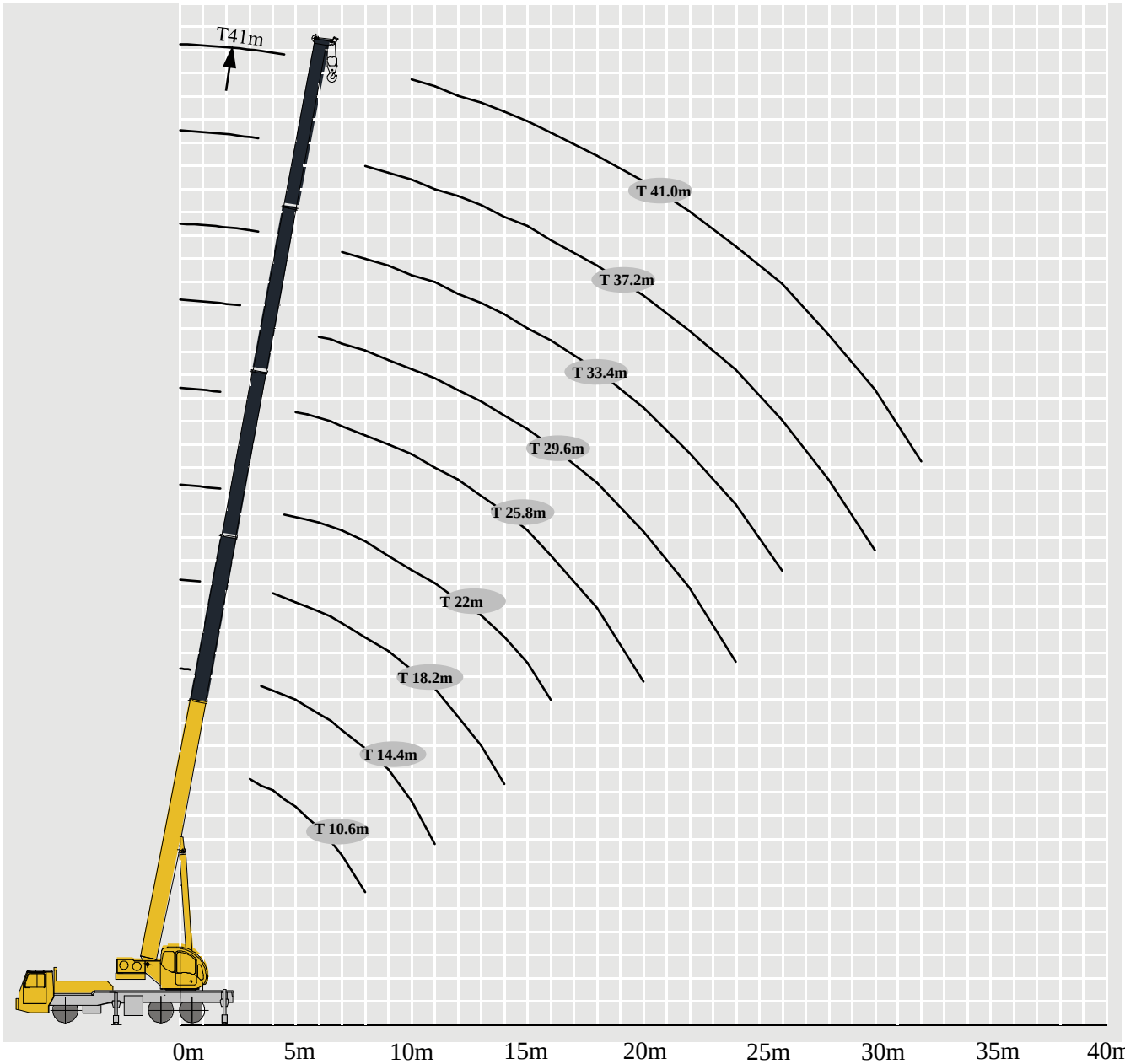
|  |  |  |
|---|---|---|
| 315/80 R 22.5（一轴Axle 1）<br>12R22.5（二、三轴Axles 2 and 3） | 2.5～80 | 40% |

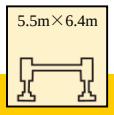
| 作业机构<br>Operation mechanism | 作业速度<br>Working speed | 最大单绳拉力<br>Maximum single line pull | 钢丝绳直径/长度<br>Rope diameter/ length |
|---|---|---|---|
|  | 0-125 m/min，单绳，第四层<br>m/min, single line, 4th layer | 32.3 kN | 14 mm/180 m |
|  | 0-125 m/min，单绳，第四层<br>m/min, single line, 4th layer | 32.3 kN | 14 mm/105 m |
|  | 0-2.5 r/min | | |
|  | 从-2°抬起至79°约38s<br>Approx. 38 s for boom luffing from -2° to 79° | | |
|  | 从10.6m伸出至41m约55s<br>Approx. 55 s for boom extending from 10.6 m to 41 m | | |

## 臂架组合方案
## Boom/jib combinations

| 主臂<br>Boom | 副臂<br>Jib |
| --- | --- |
| T：10.6~41 m | T：10.6~41 m<br>J：8.3 m |

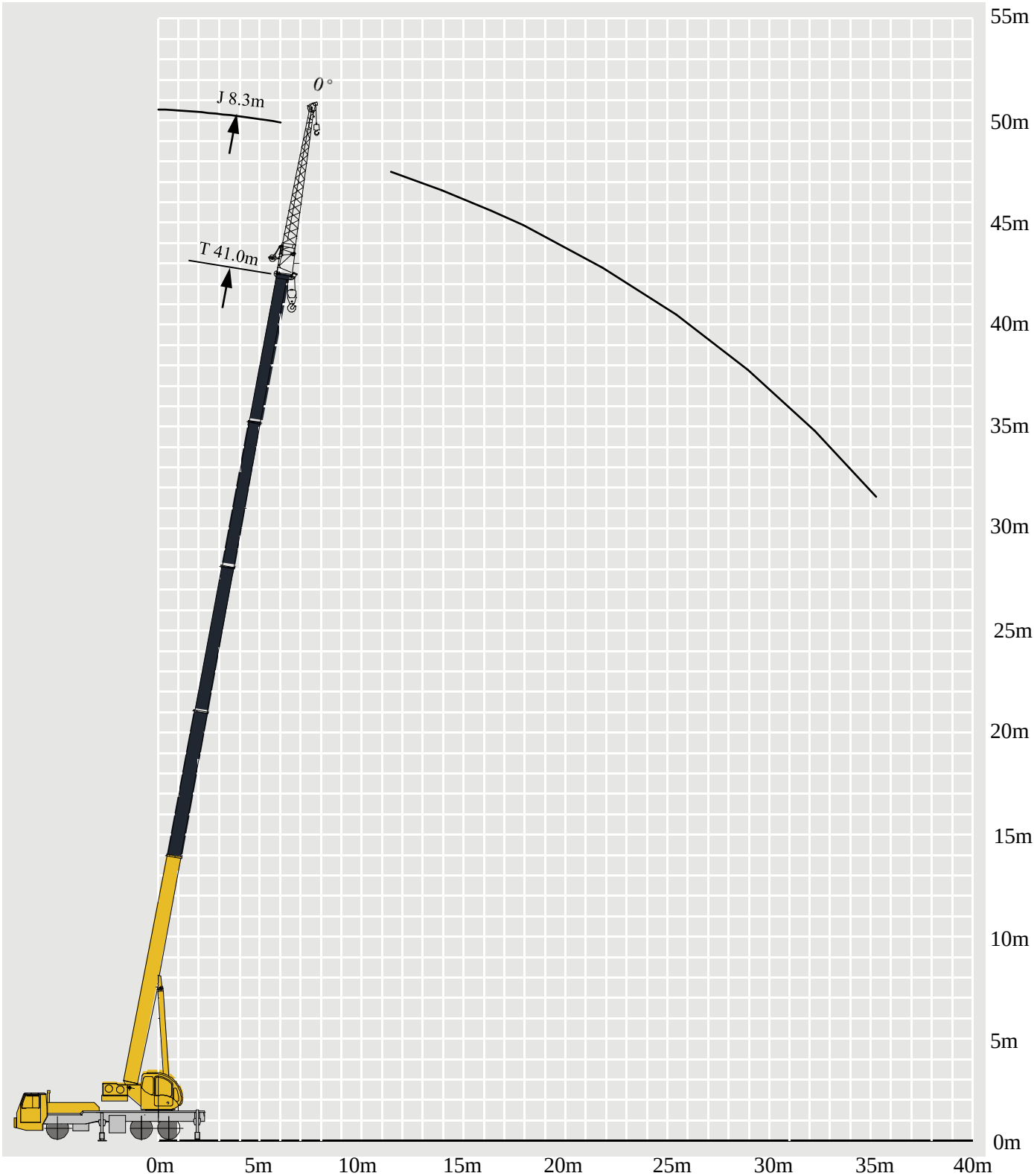
XCMG QY25K5H_1 Truck Crane www.wme.cn/xcmg-qy25l5h_1/

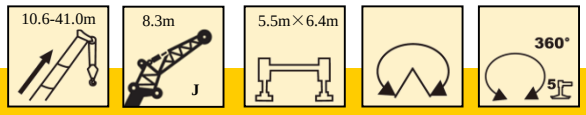

T41m
T 41.0m
T 37.2m
T 33.4m
T 29.6m
T 25.8m
T 22m
T 18.2m
T 14.4m
T 10.6m
40m
35m
30m
25m
20m
15m
10m
5m
0m
0m
5m
10m
15m
20m
25m
30m
35m
40m





| | 10.6m | 14.4m | 18.2m | 22m | 25.8m | 29.6m | 33.4m | 37.2m | 41m | |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 25.0 | | | | | | | | | 3 |
| 3.5 | 25.0 | 18.0 | 18.0 | | | | | | | 3.5 |
| 4 | 24.5 | 18.0 | 18.0 | | | | | | | 4 |
| 4.5 | 23.0 | 18.0 | 18.0 | 18.0 | | | | | | 4.5 |
| 5 | 21.7 | 18.0 | 18.0 | 18.0 | 16.8 | | | | | 5 |
| 5.5 | 19.5 | 18.0 | 18.0 | 18.0 | 16.3 | | | | | 5.5 |
| 6 | 18.0 | 17.2 | 16.0 | 14.5 | 15.6 | 12.1 | | | | 6 |
| 6.5 | 16.2 | 15.8 | 14.8 | 13.5 | 15.0 | 11.7 | | | | 6.5 |
| 7 | 15.1 | 14.5 | 14.3 | 12.9 | 14.1 | 10.9 | 9.7 | | | 7 |
| 8 | 13.0 | 12.0 | 12.5 | 11.3 | 12.5 | 10.3 | 9.1 | 8.0 | | 8 |
| 9 | | 10.3 | 10.0 | 10.5 | 11.0 | 9.7 | 8.7 | 7.6 | 6.6 | 9 |
| 10 | | 9.3 | 9.5 | 9.7 | 9.8 | 9.2 | 8.2 | 7.3 | 6.2 | 10 |
| 11 | | 7.9 | 8.1 | 8.2 | 8.3 | 8.4 | 7.7 | 6.8 | 5.9 | 11 |
| 12 | | | 7.0 | 7.1 | 7.2 | 7.3 | 7.1 | 6.3 | 5.6 | 12 |
| 13 | | | 6.1 | 6.2 | 6.3 | 6.4 | 6.4 | 5.9 | 5.3 | 13 |
| 14 | | | 5.3 | 5.4 | 5.5 | 5.6 | 5.6 | 5.5 | 5.0 | 14 |
| 15 | | | | 4.8 | 4.8 | 4.9 | 5.0 | 5.0 | 4.8 | 15 |
| 16 | | | | 4.2 | 4.3 | 4.4 | 4.4 | 4.5 | 4.1 | 16 |
| 18 | | | | | 3.4 | 3.5 | 3.5 | 3.6 | 3.6 | 18 |
| 20 | | | | | 2.7 | 2.8 | 2.8 | 2.9 | 2.9 | 20 |
| 22 | | | | | | 2.3 | 2.3 | 2.3 | 2.4 | 22 |
| 24 | | | | | | | 1.9 | 1.9 | 1.9 | 24 |
| 26 | | | | | | | 1.5 | 1.6 | 1.6 | 26 |
| 28 | | | | | | | | 1.3 | 1.3 | 28 |
| 30 | | | | | | | | 1.0 | 1.0 | 30 |
| 32 | | | | | | | | | 0.8 | 32 |


0°
J 8.3m
T 41.0m
55m
50m
45m
40m
35m
30m
25m
20m
15m
10m
5m
0m
0m
5m
10m
15m
20m
25m
30m
35m
40m




| | 0° | |
|---|---|---|
| 78 | 3 | 78 |
| 75 | 2.9 | 75 |
| 72 | 2.8 | 72 |
| 70 | 2.8 | 70 |
| 65 | 2.3 | 65 |
| 60 | 1.6 | 60 |
| 55 | 1.2 | 55 |
| 50 | 0.8 | 50 |
| 45 | 0.6 | 45 |

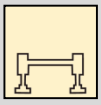
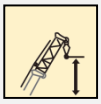
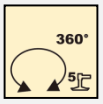
# 注意事项
# Notes

1. 表中额定总起重量值，是在平整的坚固地面上本起重机能够保证的最大总起重量，包括吊钩和吊具的重量，所以为了估算重物重量，必须减去上述的装置重量。
2. 表中的工作幅度为起吊重物离地时起重物到起重机回转轴线的水平距离，是包括起重臂变形量在内的实际值，因而起吊前应考虑起重臂变形量。
3. 只允许在5级(瞬时风速14.1m/s，风压125N/m$^2$)风以下进行作业。
4. 吊重前操作者必须对物体的重量和工作范围了解后选择合适的作业工况，严禁超出表中的数值。幅度及臂长在相邻两个数值之间时，应依据两个数值中较小值确定起重作业。
5. 应按主臂仰角范围作业，即使是空载，也不应使主臂仰角处于范围外，谨防整机倾翻。
6. 表中的主臂长度应要按照每节臂的伸缩要求进行伸出。

1. The total rated loads given in the rated load charts are the maximum lifting capacity when the crane is set up on firm and level ground, which includes the weight of the hook block and slings. The weight of above-mentioned devices should be deducted to correctly calculate the load weight.
2. The working radius shown in the rated load charts is the radius when the load is lifted off the ground, and it is the actual value including loaded boom deflection.
3. A lifting operation is permissible only when the wind force is below grade 5 (instantaneous wind speed is 14.1 m/s, wind pressure is 125 N/m$^2$).
4. Before beginning lifting operation, the operator should know the weight of the load to be lifted and its working range, and then select proper working conditions. Never operate the crane beyond the limit shown in the chart. Use the lower value from the chart when the boom length or working radius is between the range of values.
5. Observe the boom angle limit. Never operate the crane with the boom angle beyond the recommended limit even if a load is not being carried. Otherwise, the crane will tip.
6. The boom length given in the rated load charts should accord with the telescoping code of boom sections .

# 符号标识
# Description of symbols

## 常规标识
## General symbols

| | | | |
|---|---|---|---|
|  | 上车<br>Superstructure |  | 底盘<br>Chassis |
|  | 起重能力<br>Lifting capacity |  | 车桥<br>Axle |
|  | 吊臂长度<br>Boom length |  | 行驶速度<br>Travel speed |
|  | 工作幅度<br>Working radius |  | 爬坡能力<br>Grade ability |
|  | 吊臂仰角<br>Boom angle |  | 轮胎<br>Tires |
|  | 主臂起升高度<br>Lifting height with boom |  | 支腿<br>Outriggers |
|  | 固定副臂长度<br>Fixed jib length |  | 吊钩<br>Hook block |
|  | 副臂安装角<br>Jib offset angle |  | 卷扬<br>Winch |
|  | 副臂起升高度<br>Lifting height with jib |  | 使用第五支腿360°全回转<br>360° slewing with the 5th jack |
| | |  | 不使用第五支腿侧后方作业<br>Boom over side and over rear without 5th jack |

# 主要技术参数表
# Table of main technical parameters

| 类别 Category | 项目 Item | | 单位 Unit | 参数 Parameter |
|---|---|---|---|---|
| 尺寸参数 Dimensions | 外形尺寸（长×宽×高） Dimensions (L×W×H) | | mm | 13050×2550×3500 |
| | 轴距 Axle spacing | | mm | 4800+1350 |
| | 轮距（前/后） Track (front/rear) | | mm | 前轴Front axle：2060<br>后轴Rear axle：1840 |
| | 前悬/后悬 Front/rear overhang | | mm | 2476（徐工汽车XCMG Automobile）2489（齐星Qixing ）/2253 |
| | 前伸/后伸 Front/rear extension | | mm | 1524（徐工汽车XCMG Automobile）1511（齐星 Qixing）/647 |
| 重量参数 Weight | 最大允许总质量 Maximum permissible total weight | | kg | 31300 |
| | 轴荷 Axle load | 一轴 Axle 1 | kg | 6800 |
| | | 二轴 Axle 2 | kg | 12250 |
| | | 三轴 Axle 3 | kg | 12250 |
| 动力参数 Power | 发动机型号 Engine model | | —— | SC9DF290Q5 |
| | 额定功率/转速 Rated power/rpm | | kW/(r/min) | 213/2200 |
| | 最大净功率/转速 Maximum net power/rpm | | kW/(r/min) | 211/2200 |
| | 最大输出扭矩/转速 Maximum output torque/rpm | | N.m/(r/min) | 1200/1400 |
| 行驶参数 Travel | 最高车速 Maximum travel speed | | km/h | ≥80 |
| | 最低稳定车速 Minimum stable travel speed | | km/h | 2.5～3 |
| | 最小转弯直径 Minimum turning diameter | | m | ≤22 |
| | 臂头最小转弯直径 Minimum turning diameter at boom tip | | m | ≤26 |
| | 最小离地间隙 Minimum ground clearance | | mm | 250 |
| | 接近角 Approach angle | | ° | 11 |
| | 离去角 Departure angle | | ° | 13 |
| | 制动距离（制动初速度为30km/h） Braking distance (initial speed at 30 km/h ) | | m | ≤10 |
| | 最大爬坡能力 Maximum grade ability | | % | ≥40 |
| | 百公里油耗 Fuel consumption per 100 km | | L | 30 |
| 噪音 Noise | 加速行驶机外噪声 Exterior noise level when accelerating | | dB(A) | ≤84 |
| | 驾驶员耳旁噪声 Noise level at seated position | | dB(A) | ≤90 |

# 主要技术参数表
# Table of main technical parameters

| 类别 Category | 项目 Item | | | 单位 Unit | 参数 Parameter |
|---|---|---|---|---|---|
| 主要性能参数 Main performance | 最大额定总起重量 Maximum total rated lifting capacity | | | t | 25 |
| | 最小额定工作幅度 Minimum rated working radius | | | m | 3 |
| | 转台尾部回转半经 Slewing radius at turntable tail | 平衡重处 At counterweight | | mm | 3850 |
| | | 副卷处 At auxiliary winch | | mm | — |
| | 最大起重力矩 Maximum load moment | 基本臂 Base boom | | kN.m | 1063 |
| | | 最长主臂 Fully-extended boom | | kN.m | 701 |
| | | 最长主臂+副臂 Fully-extended boom + jib | | kN.m | 491 |
| | 支腿跨距 Outrigger span | 纵向 Longitudinal | | m | 5.5 |
| | | 横向 Lateral | | m | 6.4 |
| | 起升高度 Lifting height | 基本臂 Base boom | | m | 10.4 |
| | | 最长主臂 Fully-extended boom | | m | 40.5 |
| | | 最长主臂+副臂 Fully-extended boom + jib | | m | 47.4 |
| | 起重臂长度 Boom length | 基本臂 Base boom | | m | 10.6 |
| | | 最长主臂 Fully-extended boom | | m | 41.0 |
| | | 最长主臂+副臂 Fully-extended boom + jib | | m | 49.3 |
| | 副臂安装角 Jib offset angle | | | ° | 0 |
| 工作速度参数 Working speed | 起重臂起臂时间 Boom raising time | | | s | ≤38 |
| | 起重臂全伸时间 Boom fully extended time | | | s | ≤55 |
| | 最大回转速度 Maximum slewing speed | | | r/min | ≥2.5 |
| | 支腿收放时间 Outrigger extending and retracting time | 水平支腿 Outrigger beams | 收 Retracting | s | ≤20 |
| | | | 放 Extending | s | ≤40 |
| | | 垂直支腿 Outrigger jacks | 收 Retracting | s | ≤20 |
| | | | 放 Extending | s | ≤40 |
| | 起升速度（单绳,第四层，空载） Lifting speed (single line, 4th layer, no load) | 主起升机构 Main winch | | m/min | ≥125 |
| | | 副起升机构 Auxiliary winch | | m/min | ≥125 |
| 噪声 Noise | 机外辐射 Exterior noise level | | | dB（A） | ≤108 |
| | 司机位置处 Noise level at seated position | | | dB（A） | ≤85 |