

QAY400

徐工集团全地面起重机 XCMG ALL TERRAIN CRANE



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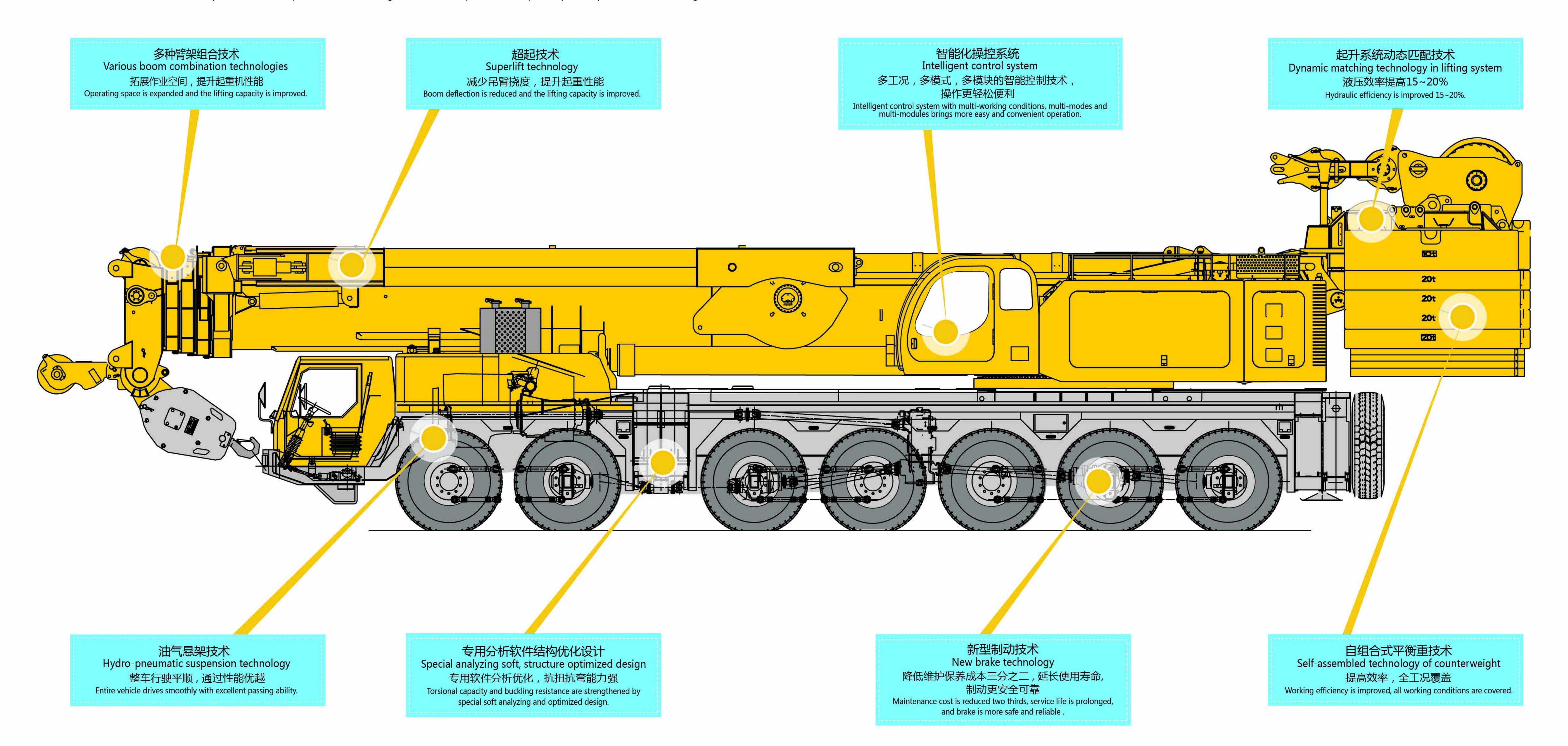




八大技术亮点 EIGHT TECHNOLOGICAL HIGHLIGHTS

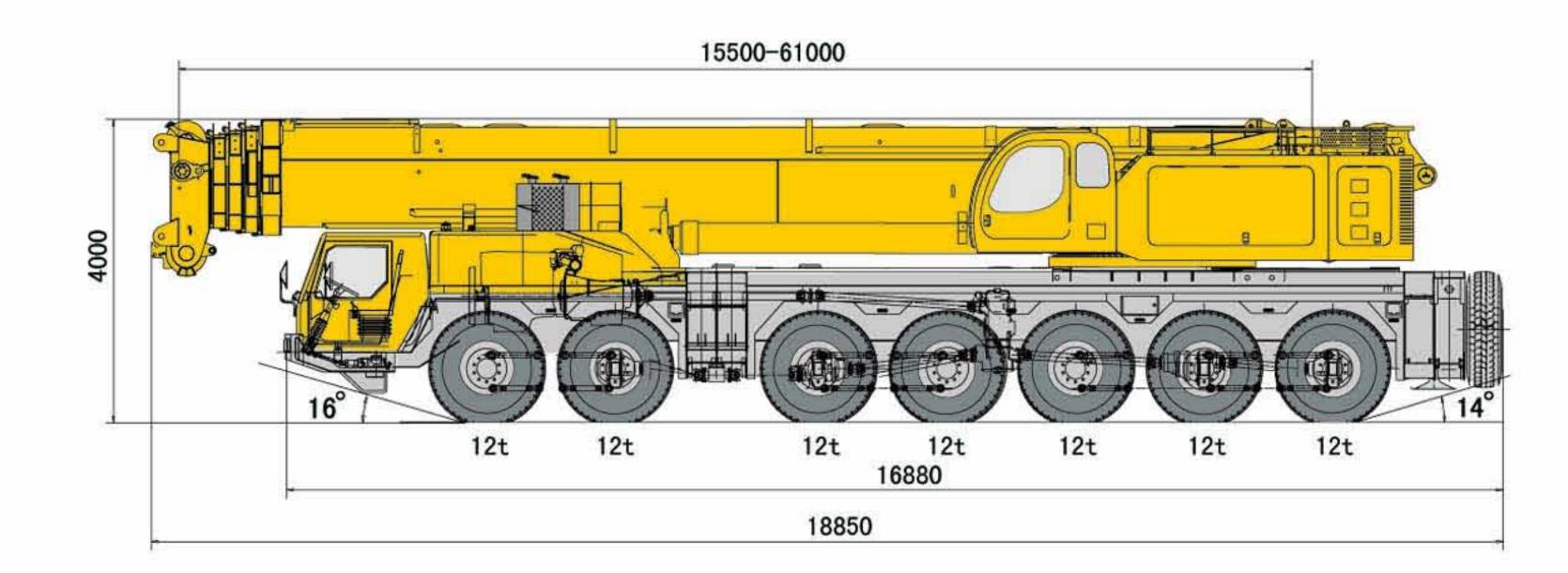
徐工全地面起重机拥有222项专利技术采用38项全新专利技术

XCMG All Terrain Crane possesses 222 patent technologies, and adopts 38 completely new patent technologies.



紧凑/灵活/重量优化•

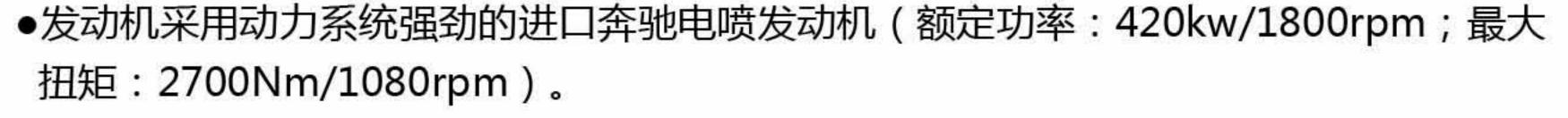
Compact/maneuverable/weight-optimized



- ●行驶状态全长18.85m,底盘长度16.88m。
- ●接近角为16°,离去角为14°。
- ●全桥转向时,最小转弯半径仅为25m。
- ●行驶状态总重量仅84t,轴重7×12t。
- ●全配置还包括140t配重,5节61m主臂,6节桁架49m副臂,77m变幅副臂,Y形超起装置。
- •Entire length 18.85m, and carrier length 16.88m in travel configuration.
- Approach angle is 16°, departure angle is 14°.
- The minimum turning radius is 25m during all-axle steering.
- •Total vehicle weight in travel configuration is only 84t, and axle load 7×12t.
- •Five-section boom extending to 61m, six-section lattice jib of 49m and 77m luffing jib, 140t counterweight and Y-type superlift device are standard equipments.

先进的驱动装置。 Advanced driving devices



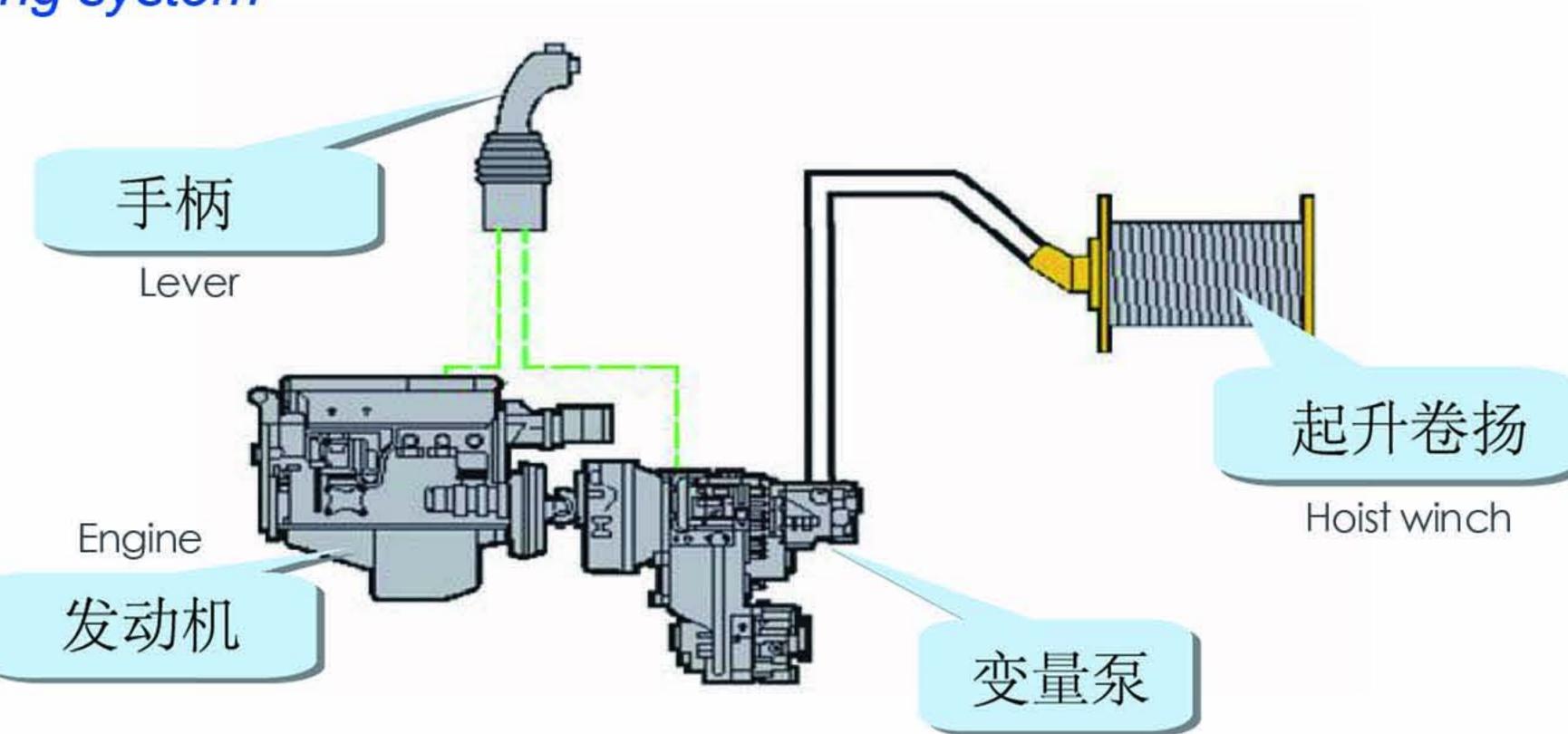


- ●变速箱采用进口16档自动操纵变速箱,带缓速制动及取力器。
- ●分动箱采用进口大降距分动箱,带高低档,差速器及取力接口。
- ●动力系统散热采用风冷、水冷和油冷相结合,散热器平置在发动机右侧,采用液压驱动风扇工作,同时发动机前端仍保留风扇,吸入冷风为机体表面降温。
- ●驱动形式为14×7 第二、五、六桥为驱动桥。
- ●转向形式为ZF半整体式转向器,双回路液压助力系统,且设有应急回路系统。
- ●最高车速70Km/h。
- ●最大爬坡度40%。
- Benz powerful electronic injection engine (rated power of 420kw/1800rpm, max. torque of 2700Nm/1080rpm)
- •Imported 16-speed automatic control transmission with retarder and PTO.
- •Imported transfer box with high/low speed, ports of differential and PTO .
- •Air cooling, water cooling and oil cooling are combined for heat dispersion of power system. With fan driven hydraulically, radiator is horizontally positioned at the right side of engine, and the fan located in the front end of the engine is retained for sucking cold air to lower the temperature of the engine block.

起升系统动态匹配技术。 Dynamic matching technology in lifting

Dynamic matching technology in lifting system

- ●液压效率提高15-20%。
- ●防止二次起升下滑。
- 消除起升系统微动时抖动现象。
- ●防止起升马达失速,飞车现象。
- ●负功率吸收及马达下降失速控制。
- Hydraulic efficiency is improved 15~20%.
- Sliding during second lifting operation is prevented.
- Shaking during inching control in lifting system is eliminated.
- Motor install and racing are avoided.
- Motor stall is controlled by negative power absorbing.



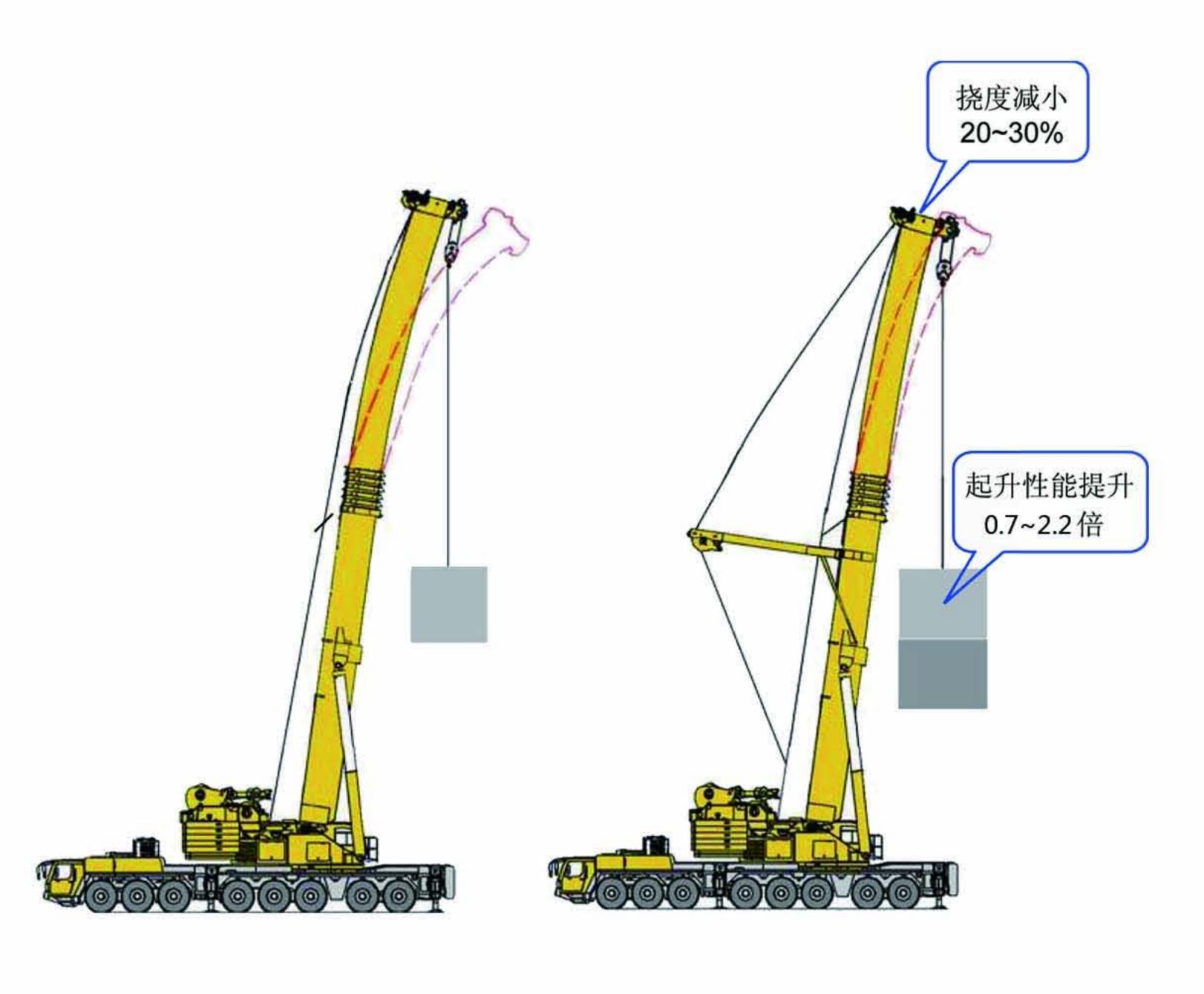
Variable displacement pump

大型全地面起重机超起技术·

Large-tonnage All terrain crane superlift technology

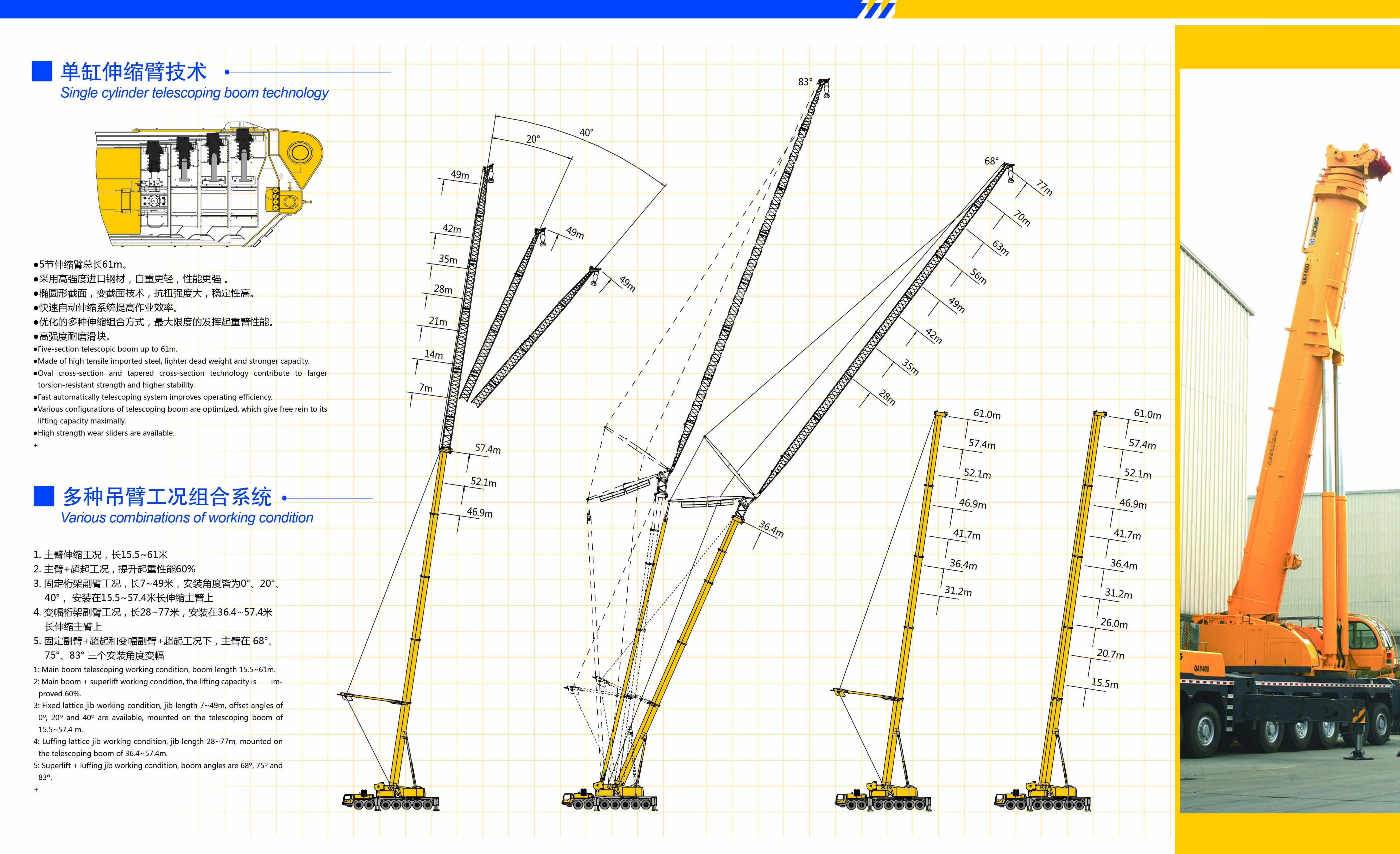


- ●减小吊臂挠度20~30%。
- ●提高起重性能70~220%。
- ●独有设计的超起装置自拆卸功能。
- 整个过程自我完成,无需其他设备配合,方便快捷。
- ●超起装置安装只需1人操作完成,极大地提高工作效率。
- ●Boom deflection is reduced 20~30%
- The lifting capacity is improved 70~220%.
- Unique superlift device self-removal function .
- Whole assembling process is finished by itself, no need for other equipment, convenient and quick.
- •Only one person is enough for assembly, the working efficiency is improved greatly.





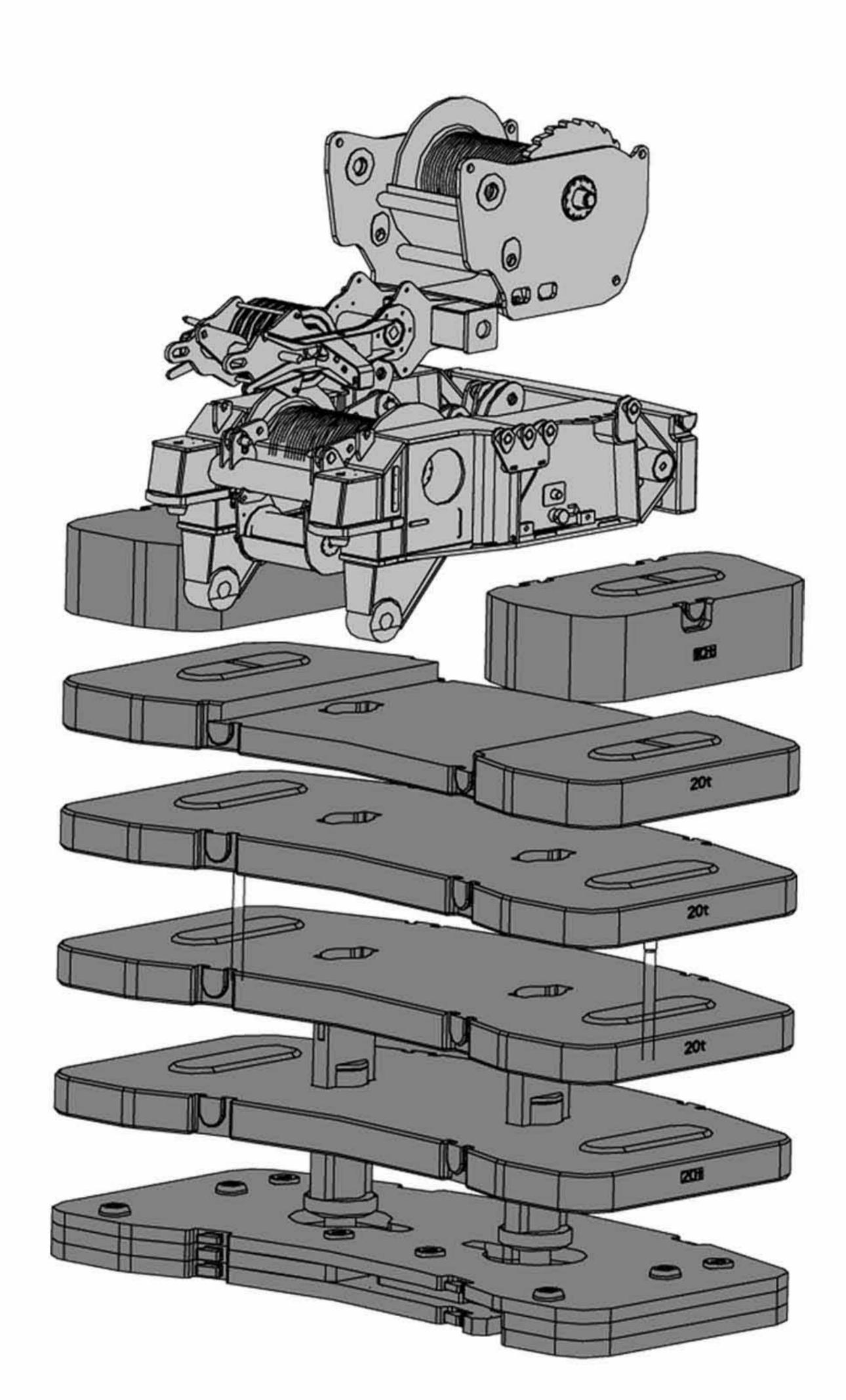






自组合平衡重技术。 Self-assembled technology of counterweight

- ●自主研发的组合式平衡重技术,能有效提升中长臂吊重性能30%。
- ●采用全新平衡重挂接方式。
- 整个安装过程自我完成,无需其他设备配合,方便快捷。
- ●多种平衡重组合方式,可满足所有工况的需求。
- ●平衡重组合安装只需1~2个小时,极大地提高工作效率。
- ●不同工况下塔卷、副卷和替代平衡重可拆装替换。
- •Self-assembled technology of counterweight researched & developed by ourselves, improves 30% the lifting capacity of medium-length boom effectively.
- •Completely new assembling method is used.
- •Whole assembling process is finished by itself, no need for other equipment, convenient and quick.
- •Many kinds of counterbalance combination way, may meet all operating mode need.
- ●Only 1~2 hours are enough for assembly, the working efficiency is improved greatly.
- •Tower jib winch, jib winch and replaceable counterweight may replace each other under different working conditions.

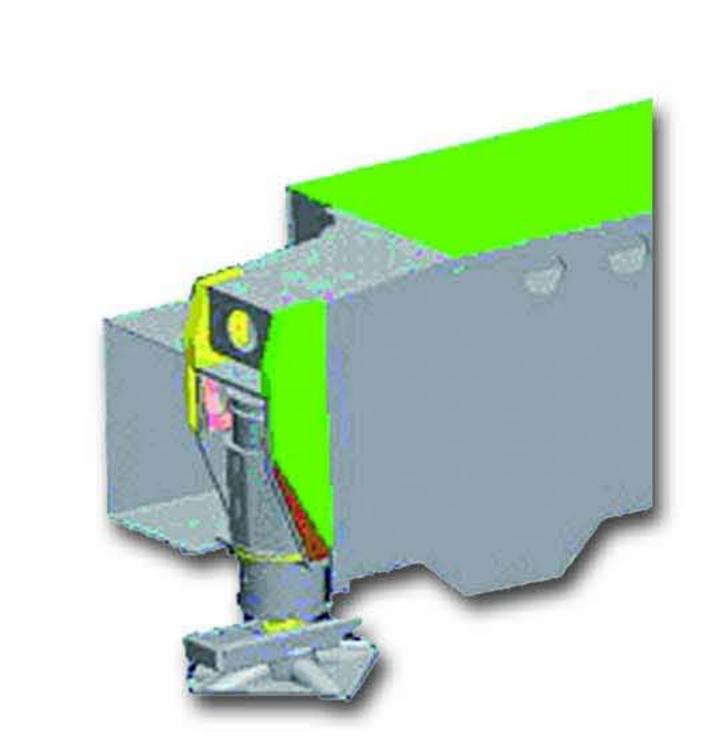




专用分析软件结构优化设计 •

Special analyzing soft, structure optimized design

- ●优化的薄臂大箱形结构,抗弯、抗扭能力强。
- ●采用进口高强度板材,自重小、性能优。
- ●采用等强度梁设计理念,异种板厚对接方式,支腿强度高、 刚度大、抗扭转能力强。
- ●活动支腿采用内藏式侧面搭接技术,满足横向大跨距,增大支服按按长度。
- Optimized thin boom box structure contributes to strong torsional capacity and buckling resistance.
- Made of high tensile imported steel, lighter dead weight and stronger capacity optimized frame structure.
- Design concept of equal strength beam and joining way of steel plates with different thicknesses make outrigger higher strength, rigidity and torsional capacity
- Built-in side overlapping technology applied in outrigger beams increases outrigger span.



新型制动技术。 New brake technology

- ●采用行车制动+驻车制动+辅助制动结合的制动系统。
- ●行车制动采用双回路系统,两回路各自独立,确保制动的有效性。
- ●配备ABS防抱死制动系统,保证车辆获得最好制动稳定性和方向操纵性。
- ●辅助制动为发动机缓速制动和排气制动,并通过制动综合管理提高制动系统的安全性和舒适性。
- ●制动柔和平稳,无冲击感,体验全新制动感受。
- •The brake system consists of service brake, parking brake and auxiliary brake.
- Service brake adopts independent dual circuit system for brake effectiveness.
 ABS equipped ensures the best brake stability and direction control ability.
- Auxiliary brake includes engine retarder brake and transmission retarder brake. Safety and comfort in brake system are improved by brake comprehensive management.
- •Smooth brake, no impact feeling, completely new brake is experienced.

油气悬架技术。

Hydro-pneumatic suspension technology

- ●可实现车辆的上升、下降、手动及自动调平、弹性与刚性转换,使车辆能够轻松通过涵洞、桥梁等限高场所。
- ●缓和冲击载荷,起到衰减振动的作用,保证车辆具有良好的行驶平顺性和通过性,提高了乘坐舒适性。
- ●双纵臂导向,约束轴的运动轨迹。
- ●实现车辆的操纵稳定性,上车始终保持平稳。
- Vehicle up and down movement, manual and automatic leveling, switch-over of flexible and rigid suspension may be realized with it, so the vehicle may freely pass culvert, bridge and low underpasses.
- Shock load may be buffered, taking the role of damping vibration, therefore, driving smoothness and pass ability are available, and driver's comfort is improved.
- Imported transfer box with high/low speed, ports of differential and PTO.
 Dual longitudinal push rods are to confine the path of axle motion.
- Vehicle operation stability is ensured, and superstructure smoothness is kept...





全方位人性化设计 •

Overall ergonomic design

起重机支腿操作 OUTRIGGER OPERATION ●不同的支撑位置

支腿完全缩回

半伸位置:6.23m×9.8m 全伸位置:9.5m×9.8m

- ●支脚盘固定安装,由防护罩保护。
- ●支腿水平调整,仅需通过一个按钮即可自动将起重机调至水平状态。
- ●底盘两侧都有支腿控制面板,具有形象识别的键盘、电子水平仪、以及"发动机启动、停止" 按钮和速度控制键,均可发光显示并可锁定。
- 支腿的操作过程严格按照程序设定, 防止事故发生。
- 由四个工作灯向支腿区域提供照明。

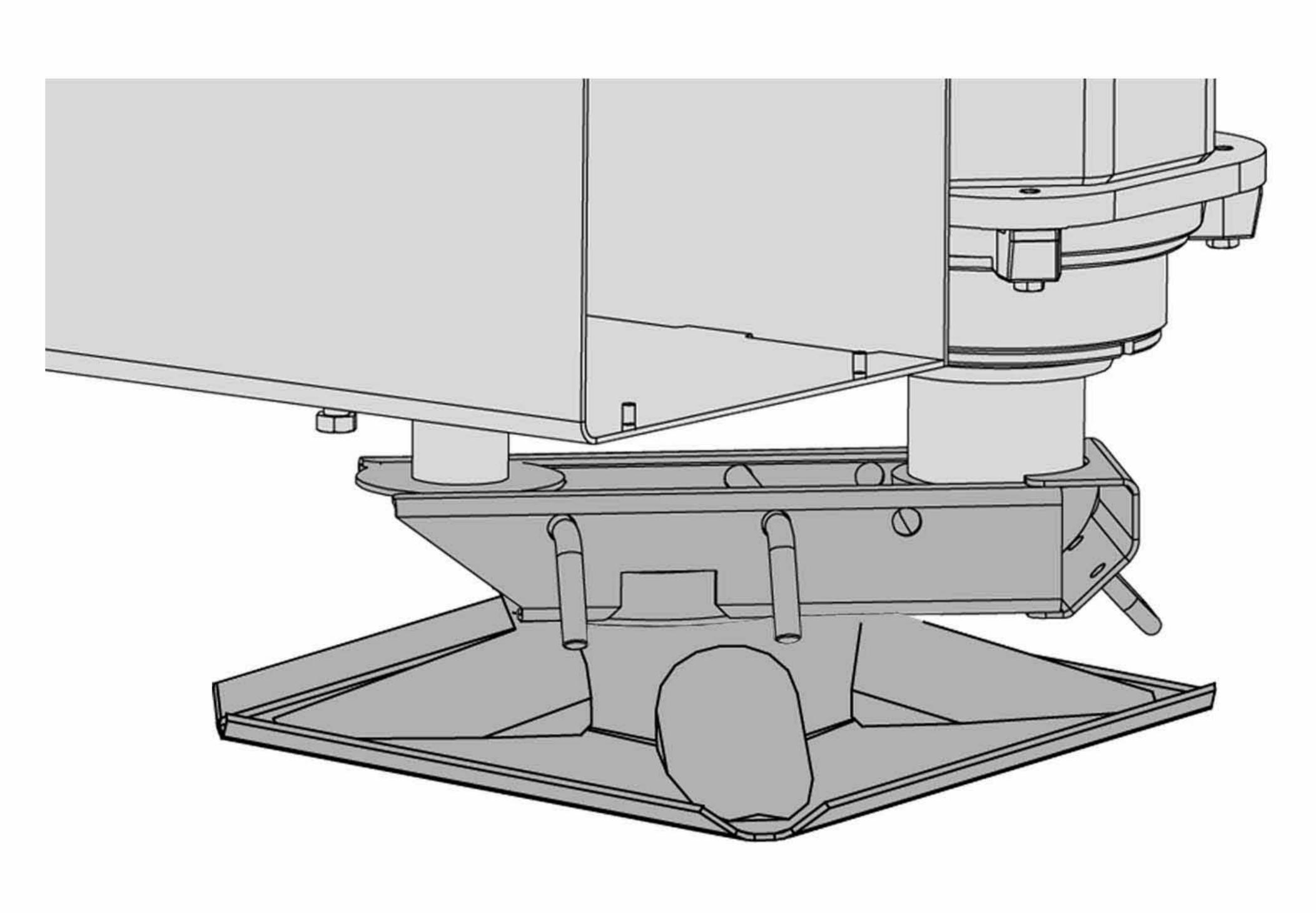
Various supporting positions

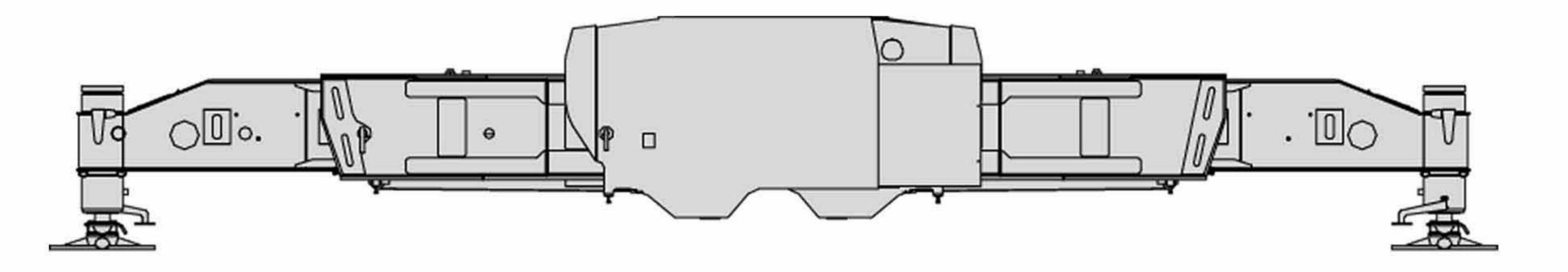
Outriggers are retracted fully

Half-extended outrigger span: 6.23m×9.8m

Fully-extended outrigger span: 9.5m×9.8m

- Outrigger floats are fixed permanently and protected by protective covers.
- The vehicle may be leveled automatically only by pressing a button.
- •On both sides of carrier there is an outrigger control console individually, on which there are a key board and an electronic level gauge. Engine start and stop buttons as well as speed control keys with pictograms on the key board are indicated luminously and deactivated by an enable switch.
- Outrigger operating procedure is set strictly according to programs to prevent accident occurring.
- There are four working lamps for supplying illumination to outrigger area.







- ◆大圆弧操纵室,四周装有有色玻璃,前窗和天窗配有雨刮器和清洗器。
- ●操纵杆扶手一体化设计,控制面板按人机工程学设计。
- ●上车操纵室可旋转20°, 拓宽视野。
- ●操纵室配置冷暖空调,营造舒适环境。
- •Streamlined operator's cab, tinted panes all around, wiper and washer are equipped on both windshield and roof window.
- Armrest integrated with control levers, and control console designed ergonomically.
- •It can be tilted back 20° for increased operator visibility during operation.
- Heater and air conditioner contribute to comfortable circumstance.

舒适的下车驾驶室 COMFORTABLE DRIVER'S CAB

- ●采用新型外观结构驾驶室,结构上采用气缸悬挂,降低车辆振动对驾驶人员的影响。
- ●采用空气悬浮座椅,可多方位调整并配备安全带,提高驾乘舒适性。
- ●电动后视镜、电动门窗提高操作的舒适性。
- ●操作和显示元件的放置位置符合人机工程学原理,保证连续使用时操作的简便性和舒适性。
- ●方向盘的高度和角度均可调。
- ●反光镜可加热、并可电动调节。
- ●3套自动清洗装置和间歇控制功能的雨刮器。
- New appearance driver's cab, and air cylinder suspension structure is used to reduce vibration effect to driver.
- Air cushioned seat is adjustable at multi-direction, with safety belt equipped, driving comfort is improved.
- •Electric exterior mirrors, doors and windows improve the comfort of operation.

Three sets of automatic washer and intermittent wiper are available.

- Ergonomic location of operating elements and indicators ensures simplification and comfort during continuous operation.
- Steering wheel adjustable in height and inclination.
- Heatable and electrically adjustable exterior mirrors.

AY400 徐工集团全地面起重机 XCMG ALL TERRAIN CRANE











智能化操控系统 Intelligent control system

徐重专有控制系统

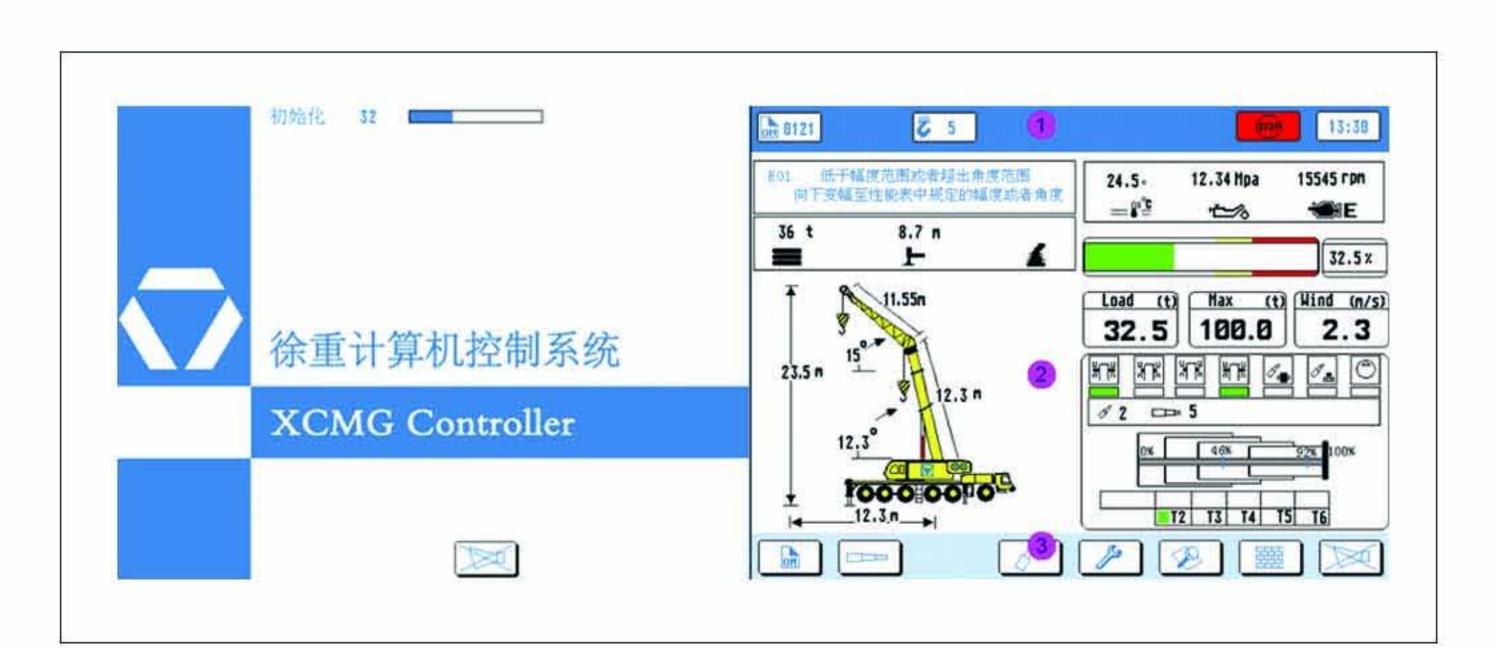
XCMG UNIQUE CONTROL SYSTEM

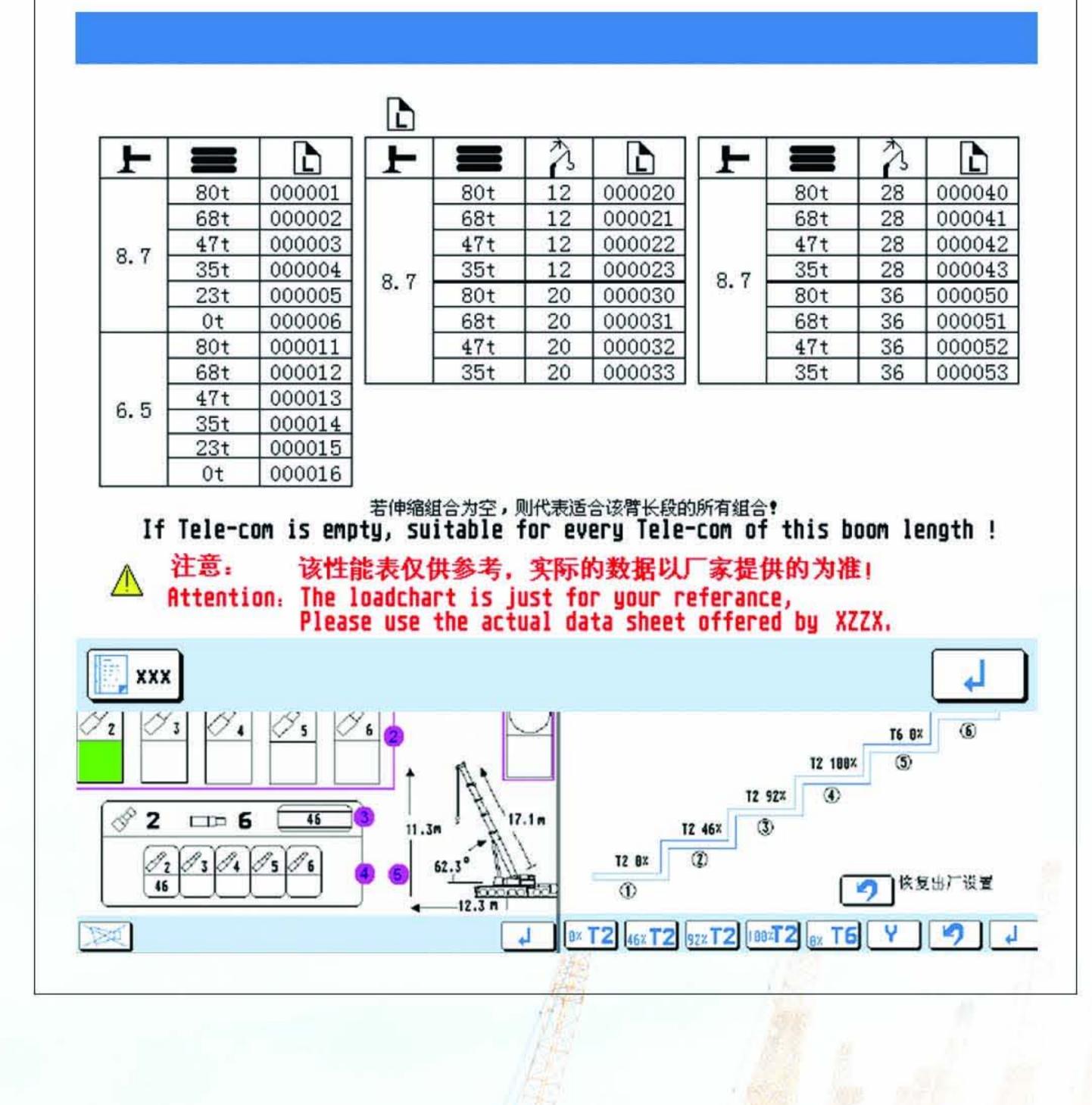
- ●标准应用程序:力矩限制器功能、主显示画面程序、工况选择程序、性能浏览程序等。
- ●方便的互动式工况设置。
- ●工况的调整可以实时显示,直观、方便。
- ●力矩过载或其它危险动作,控制程序自动进行限制。
- ●精确的手柄调节功能,使操作平稳、高效。
- Standard application programs for: load moment indication function, main display, working condition selection and performance browse etc.
- Convenient interactive working condition setting.
- Real-time indication of adjustment for working condition, visual and convenient.
 Moment overloading and other dangerous movements may be limited automatically by control program.
- Accurate adjusting function of lever makes operation smooth and efficient.

辅助伸缩臂系统

TELESCOPING BOOM CONTROL SYSTEM

- ●通过直观的显示界面实时检测伸缩过程。
- ●可自由选择自动、手动伸缩模式,高效、便捷。
- ●具有自动伸缩功能,操作简单。
- ●可以方便进行参数的校正。
- The testing of boom telescoping process is indicated by visual display interface.
 Manual and automatic telescoping modes may be selected freely, high efficient and convenient.
- Automatic telescoping function is available, easy to operate.
- Parameters may be calibrated easily.





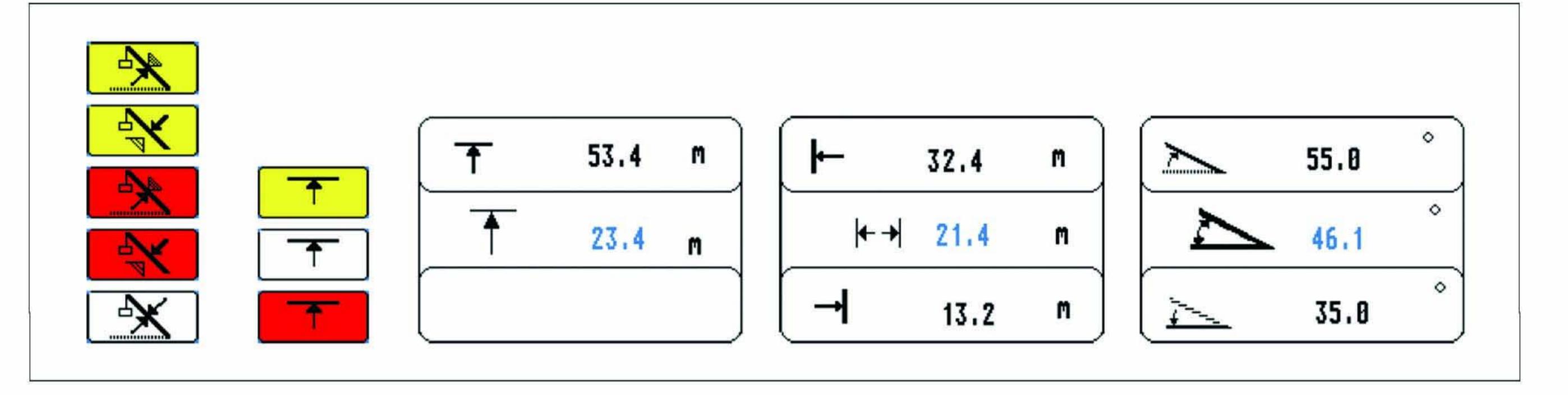


虚拟墙系统 VIRTUAL WALL SYSTEM

- ◆针对具体工作区域进行限制,方便、安全。
- ●滑轮头的起升高度限制●工作半径限制

The lifting height of pulley head
 Working radius

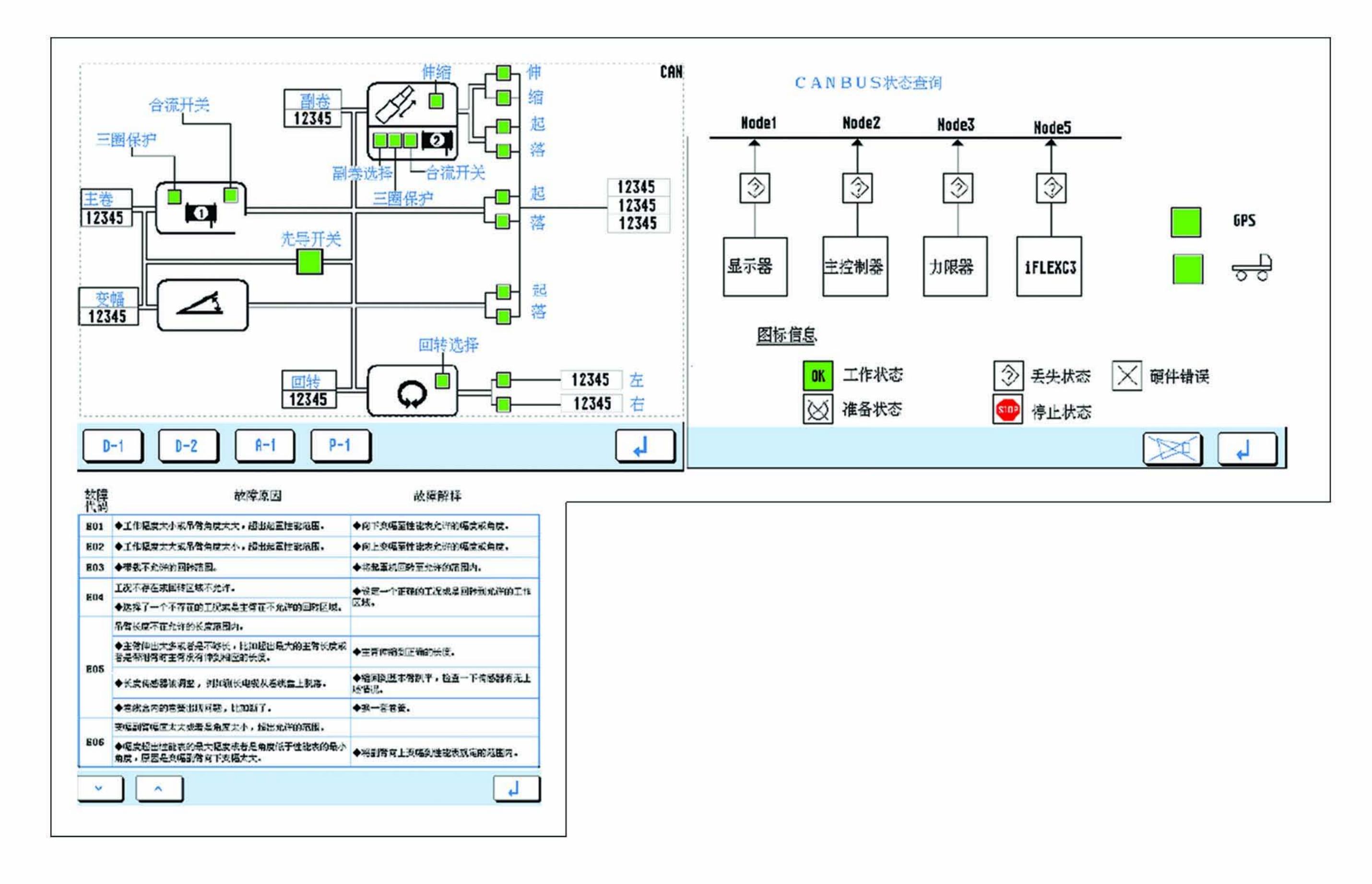
- Convenient and safe, it is aimed to limit
 - t
- ●边界限制
- Slewing angle
 Boundary



完善的故障诊断及实时检测功能

PERFECT FAULT DIAGNOSE AND REAL-TIME TESTING FUNCTION

- ●维修人员可以方便快捷的通过自诊断系统寻找故障点,并由通过故障提示排除故障。
- ●将操作过程直观的显示在界面上,用户可以方便的进行查询。
- ●将各主要器件的参数直接显示,操作人员可以观察整个系统的输入及输出。
- •Fault may be found quickly through the diagnose system, and be removed by indication.
- Operating process is indicated directly on the interface, and inquiry is able to be done.
 Parameters of main parts are displayed directly, and the input and output of whole system may be observed by operator.





功能强大、高效的CAN总线技术

POWERFUL AND HIGH EFFICIENT CANBUS TECHNOLOGY

- ●控制器之间采用总线连接,减少接口,提高了可靠性。
- ●总线型元器件可由控制节点进行诊断,快速、准确的判断故障。
- ●实时采集发动机数据并作出调整,提高整机性能。
- ●标准的总线技术具有极大的扩展空间,并提高整机效率。
- CANbus is used between controllers, interface decrement improves reliability.
- CANbus components may be diagnosed by control nodes, fault may be judged quickly and accurately.
 Real-time collection of engine data and subsequent regulation improve whole machine performance.
 Standard CANbus technology has extensive space to improve entire machine efficiency.





