

2250/180t

1700/136t

JLD Tower Crane for Wind Turbines

Professional in Crane Manufacture

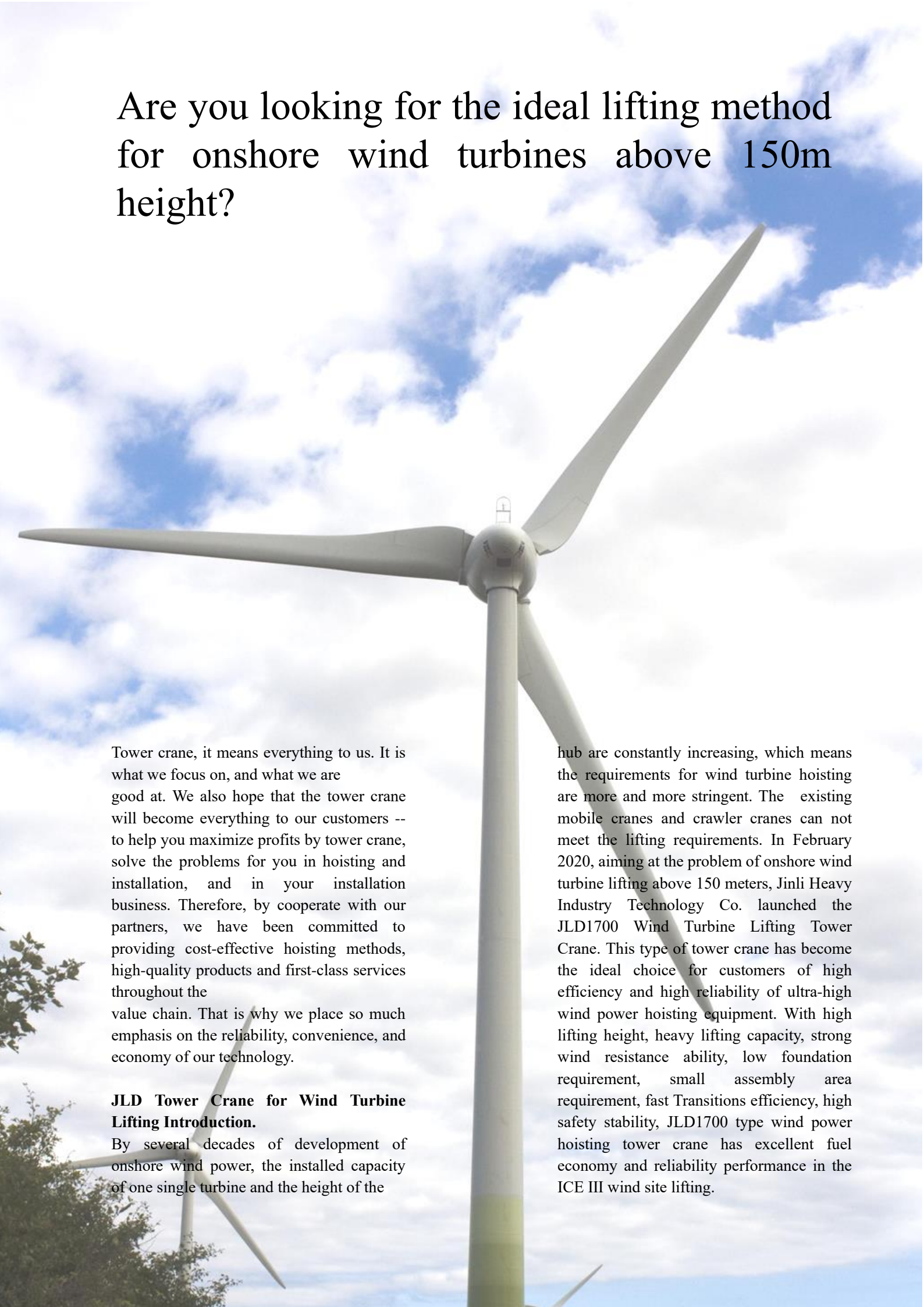
Are you looking for the ideal lifting method for onshore wind turbines above 150m height?

Tower crane, it means everything to us. It is what we focus on, and what we are good at. We also hope that the tower crane will become everything to our customers -- to help you maximize profits by tower crane, solve the problems for you in hoisting and installation, and in your installation business. Therefore, by cooperate with our partners, we have been committed to providing cost-effective hoisting methods, high-quality products and first-class services throughout the value chain. That is why we place so much emphasis on the reliability, convenience, and economy of our technology.

JLD Tower Crane for Wind Turbine Lifting Introduction.

By several decades of development of onshore wind power, the installed capacity of one single turbine and the height of the

hub are constantly increasing, which means the requirements for wind turbine hoisting are more and more stringent. The existing mobile cranes and crawler cranes can not meet the lifting requirements. In February 2020, aiming at the problem of onshore wind turbine lifting above 150 meters, Jinli Heavy Industry Technology Co. launched the JLD1700 Wind Turbine Lifting Tower Crane. This type of tower crane has become the ideal choice for customers of high efficiency and high reliability of ultra-high wind power hoisting equipment. With high lifting height, heavy lifting capacity, strong wind resistance ability, low foundation requirement, small assembly area requirement, fast Transitions efficiency, high safety stability, JLD1700 type wind power hoisting tower crane has excellent fuel economy and reliability performance in the ICE III wind site lifting.





JLD1700/136t Wind Turbine TC:

Max. Lifting Height: 183m

Max. Lifting Weight: 136t

JLD1700/136t can meet the lifting requirements of the hub height under 170m.

JLD2250/180t Wind Turbine TC:

Max. Lifting Height: 198.5m

Max. Lifting Weight: 180t

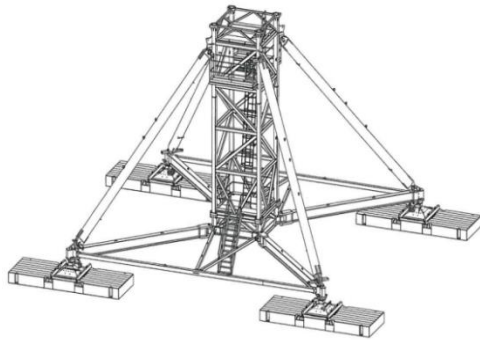
JLD2250/180t can meet the lifting requirements of the hub height under 185m.

How can we ensure the spot shift cycle of tower crane within 36 hours ?

Advanced highly integrated modular design concepts and mature technology

Pedestal module:

The tower crane foundation is easy to handle, flatten and tamp is enough. The bottom frame adopts cross structure, and the support rod is equipped with hydraulic plug pin. The bottom frame adopts a special method of adjusting the support. The support pedal integrates the hydraulic cylinder, and can adjust the foundation flatness conveniently. The bottom frame can be folded for transportation between wind power sites conveniently. One tower crane can be equipped with two pedestal module, another bottom frame can be installed in advance in this way, greatly improving the speed of the transition efficiency.



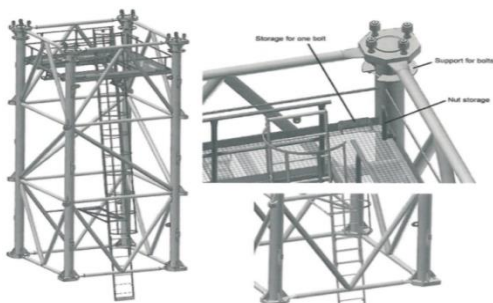
Jacking Module:

the Jacking Module adopt truss structure. Small transportation size, convenient for site transportation. The jacking system is integrated with hydraulic jacking system and advanced bivariate pump is adopted to supply oil.



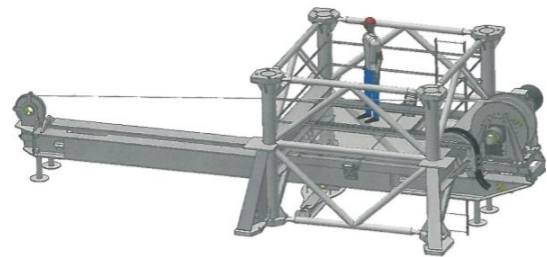
Tower Body Module:

the tower body adopts welded integral truss structure, with special designed self-positioning flange bolt connection. The connection can be reused unlimited with low cost. It equipped with two sets of special imported heavy torque electric wrenches, with the superiority of precise pre-tightening torque control and rapid crane assembly and disassembly speed.



Standard Section Lifting Module:

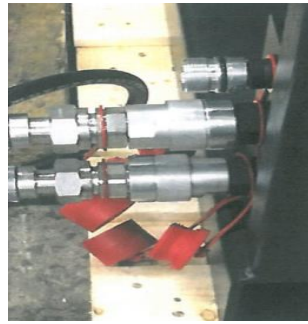
Tower body jacking and section import mechanism is integrated in the transition section. The mechanism adopts internal planetary reducer imported from Germany, with small volume and light weight. The transition joint adopts the semi-split design, which can save the transportation cost of long distance transition and improve the efficiency of transition between wind power sites.



Intelligent Connection & Ultimate Humanize design

Hydraulic System Connection:

Adopt quick hydraulic joints that are easy to operate.



Pin Shaft Connection:

Besides tower body, most other parts of the crane are connected by pin shaft. Equipped with special hydraulic plug press machine, reduced labor intensity, and improved disassembly efficiency.



Electrical system connection:

The power cable adopts the aviation quick plug, and the control cable adopts the integrated plug terminal row. The signal line on the Jib is provided with a cable winch for easy retraction and redeployment.



Special tools:

The Crane is equipped with a complete set of special tools (including: the sling tools, special high-torque electric wrench, hydraulic plug press machine, Foundation Section hydraulic installation tool, special low floor transfer truck, etc.)



Tower Body Connection:

The tower body is connected with a guide stop flange. With the special designed bolts, every single part is designed belonging a corresponding location. The bolts is made of special high-strength steel with large assurance factor, and can be reused unlimited. Equipped with special electric torque wrench, the crane has high disassembly efficiency.



Highly Intelligent Control System:

The tower crane is equipped with two sets of operating systems: driver's cab and ground remote control, and also equipped with intelligent remote control system besides safety protection system. User can monitor and record the current operation status of tower crane according to different authority, including the operation status of each winch, the scene of on-site hoisting, system fault diagnosis, debugging and maintenance, etc.



Advanced NC Machining Ability

JINLI has sophisticated processing equipment: CNC plasma cutting machine, CNC plasma intersecting line cutting machine, automatic welding tool, automatic welding robot, all kinds of CNC machine tools, TK6920 CNC boring and milling machine (meet 4.5mx4.5mx17m ultra-large structural parts machining). For ensuring the interchangeability and disassembly accuracy. Standard section tower body, Jib section and other parts are integrated CNC processing.



The factory has built 10000TM tower crane test bed. The test bed is equipped with 2000TM (80t) class super large tower crane. It is specially used for installation of the new crane, which is supposed to commissioning and experiment on it. Before each tower machine leaves the factory, it will go through several times of installation and debugging in the factory. After passing the strict quality inspection, it will be delivered to the user after passing the load test.



Advanced Anti-corrosion Coating Line:

The coating line is equipped with automatic shot blasting machine for pretreatment of raw materials, and the coating line including shot blasting room, polishing room, paint spraying room and baking room also. Each room is 7mX7mX18m large for big structural parts. Under the guidance of advanced coating technology, the coating quality of the tower crane is guaranteed.



Ideal Choice for Particular Wind Farm

——JLD Tower Crane

Low Speed Wind Power Farm

In ICE III B low wind speed wind power farm, the wind turbine needs larger and stronger blade and generator to improve power generating capacity, reduce the KWH cost. Therefore, the hub height of low wind speed turbine is generally designed above 140m. The 162m high wind turbine is accomplished in China, and Vestas has reached a peak of 169m height. JLD Tower Crane is specially designed and developed for high wind power turbine. The maximum lifting height can reach up to 181m, which can meet the lifting requirements of wind turbine below 170m. Its economy and safety are especially obvious in the lifting of turbine units above 140m.

Mountain Wind Power Farm

In the construction of mountain wind power, it is necessary to bull-doz the hilltop to get a work-yard, and the size of the work-yard directly determines the project investment cost. The traditional wind power construction equipment is mainly crawler cranes. Crawler cranes usually cannot meet the construction requirements due to their large assembling site. Jld1700/136t tower crane only need 20m×20m work-yard, and site requirements of 40m×30m can be enough for one unit construction. It is more suitable for hill, mountain land wind turbine lifting, but also applicable to the wind farm maintenance.





Lotus Pond and Fish Pond in the Middle and Eastern Regions

The development of domestic wind power has shifted to the central and eastern regions now. Its typical characteristics are strong power absorption capacity, but

most of them are in the wind field with low wind speed and poor wind resources, and there are more cultivated land, lotus root pond, fish pond, wires and cables in the construction area. The wind power turbine lifting is in the condition of higher lifting height, small construction site, poor foundation condition of construction site. JLD1700/136t tower crane foundation requirements are low (only 0.2mpa), assembly needs a small site (40m×30m), high lifting height (up to 181m) and other advantages compared with other cranes.

Hoisting of Mixed Tower Wind Power

With the increasing of wind turbine height and single installed capacity, the tower barrel diameter is increasing too, for support the larger impeller and higher power capacity and annual power generation of the turbine. By changing the proportion of concrete section and steel section, the contradiction between the increase in height of ordinary steel tower cylinder and the construction cost can be greatly reduced and the economy can be maximized. Because of the need for grouting during the construction of the mixed tower, the installation and construction time is longer and the requirements for the wind resistance of the crane are higher. Jld1700/136t tower with super wind resistance and good economy more suitable for mixed tower hoisting.

How Would You Benefit from Choosing JLD Wind Turbine Tower Crane?

It is very important to choose suitable crane for the wind power project lifting.

All over the world, the height, size and weight of wind turbine produced by different manufacturers are different according to different wind farm of wind resources. Therefore, lifting requirements are also different, so it is indispensable for crane selection and lifting plan optimization. It is the first and most important step to choose suitable crane for the wind power project lifting.

We can design the lifting plan suitable for project according to your existing wind power project situation and the lifting characteristics of JLD Wind Turbine Tower Crane, according to the situation of lifting position and turbine size and weight, our technicians simulate the site conditions through 3D computer software to analyze the more suitable station of the tower crane, the layout of the auxiliary crane, the impact of the size and weight of the engine room and wheel hub on the tower crane, etc., so as to provide a solid foundation for your safety lifting.

Considerate Construction Organization and Skilled Tower Crane Dismantling

The construction efficiency of the project determines the profit of project execution. Whether the tower crane can be disassembled and transferred within 36 hours, the lifting time of the turbine, how many tower cranes equipped with the project, and how to reasonably organize the site construction are all important factors restricting the construction efficiency of the project.

We have prepared detailed operation instructions for tower crane dismantling and assembly and provided practical training for customers in the factory to ensure that every customer can master the installation and disassembly of tower crane skillfully. According to the client's project situation, we develop the recommended and reasonable tower crane configuration plan for the client, and make reasonable suggestions for the construction organization. Provide as detailed technical support as possible to help customers improve the efficiency of the project construction, to ensure the maximization of customer revenue.



The Selection of Auxiliary Crane and Transfer Vehicle is Also Critical

We recommend that the auxiliary crane for JLD1700/136t tower crane disassembly needs one 180-ton crawler crane and one 80-ton mobile crane. Auxiliary cranes can be reasonably arranged on site according to specific site conditions and the number of JLD1700/136t tower cranes. We designed and customized special transport vehicle (optional for users) to facilitate the completion of Bottom Cross Beams, Climbing System, Crane Jib (two sections), Back Deck+Winches+Electric System, Front Deck+Slew Mount+Mast for the quickly transport on site.

Intelligent Remote Control System and Perfect After-sales Service

Each of our crane is equipped with a highly intelligent remote control system for remote operation and maintenance, online monitoring, fault diagnosis and troubleshooting. Users can grasp the situation of illegal operations in real time, eliminate hidden dangers in advance, improve the level of scientific management. It can timely obtain the operation status of tower crane, timely maintenance, trouble shooting and so on. In addition, we have an excellent after-sales service team ready to respond within 24 hours. Convoy for you in the use of JLD1700/136t tower crane lifting process.



JLD2250/180t Tower Crane

Parameters

Power Supply 450kW Diesel Generator

Mechanism Power

| | |
|--------------------------|--------|
| Lifting Winch | 200kW |
| Luffing Winch | 110kW |
| Slewing Winch | 3×15kW |
| Hydraulic Jacking | 2×45kW |
| Standard Section Lifting | 37kW |

Speed

| | |
|--------------------------|------------|
| Lifting | 0-15m/min |
| Luffing | 0-23m/min |
| Slewing | 0-0.5r/min |
| Hydraulic Jacking | 0-1m/min |
| Standard Section Lifting | 0-10m/min |

Capacity

| | |
|-----------------------------|----------|
| Rated Load Moment | 2250 t·m |
| Max. Lifting Load | 180t |
| Radius at Max. Lifting Load | 8-12.5m |
| Max. Lifting Height | 198.5m |
| Max. Lifting Radius | 68.5m |

Other Parameters

| | |
|----------------------------------|---------------------|
| Rear-end Swing Radius | 8.7m |
| Foundation Capacity Requirements | 170kPa |
| Working Wind Pressure | 250N/m ² |
| Non-Working Wind Pressure | 800N/m ² |
| Dead Weight | 752t |
| Min. Working Temperature | -20°C |
| Min. Non-working Temperature | -40°C |

Dimensions , Weights & Mounting Height

| | | |
|---|------------|-------|
| Substrates | | |
| 7.02m × 2.42m × 0.5m | 4x11.5t | 0m |
| Bottom Cross Beams | | |
| 21.75m × 3.88m × 1.51m | 21t | 2m |
| Bottom Section | | |
| 10.5m × 3.8m × 3.8m | 23t | 12.4m |
| Standard Section | | |
| 7.5m × 3.75m × 3.75m | 15 × 18t | 27.4m |
| Climbing System | | |
| 15.22m × 4.1m × 5.1m | 48t | 43m |
| Transition Section+Standard Section Lifting | | |
| 9.31m × 4.1m × 2.7m | 20t | 29.6m |
| Front Deck+Slew Mount Unit | | |
| 4.45m × 5.6m × 3.5m | 43t | 35.2m |
| Rear Deck+Lifting Winch+Electrical System | | |
| 6.5m × 4.7m × 3.5m | 40t | 35.7m |
| Counter Weight | | |
| 7.5m × 3.46m × 0.24m | 11 × 13.5t | 35.2m |
| Mast Assembly+Luffing Winch | | |
| 14m × 3.55m × 3m | 28t | 48.7m |
| Boom Bottom Section | | |
| 40m × 3.4m × 3.4m | 22t | 43m |
| Boom Top Section | | |
| 32m × 3.2m × 3.2m | 23t | 45.5m |

Accessory Options

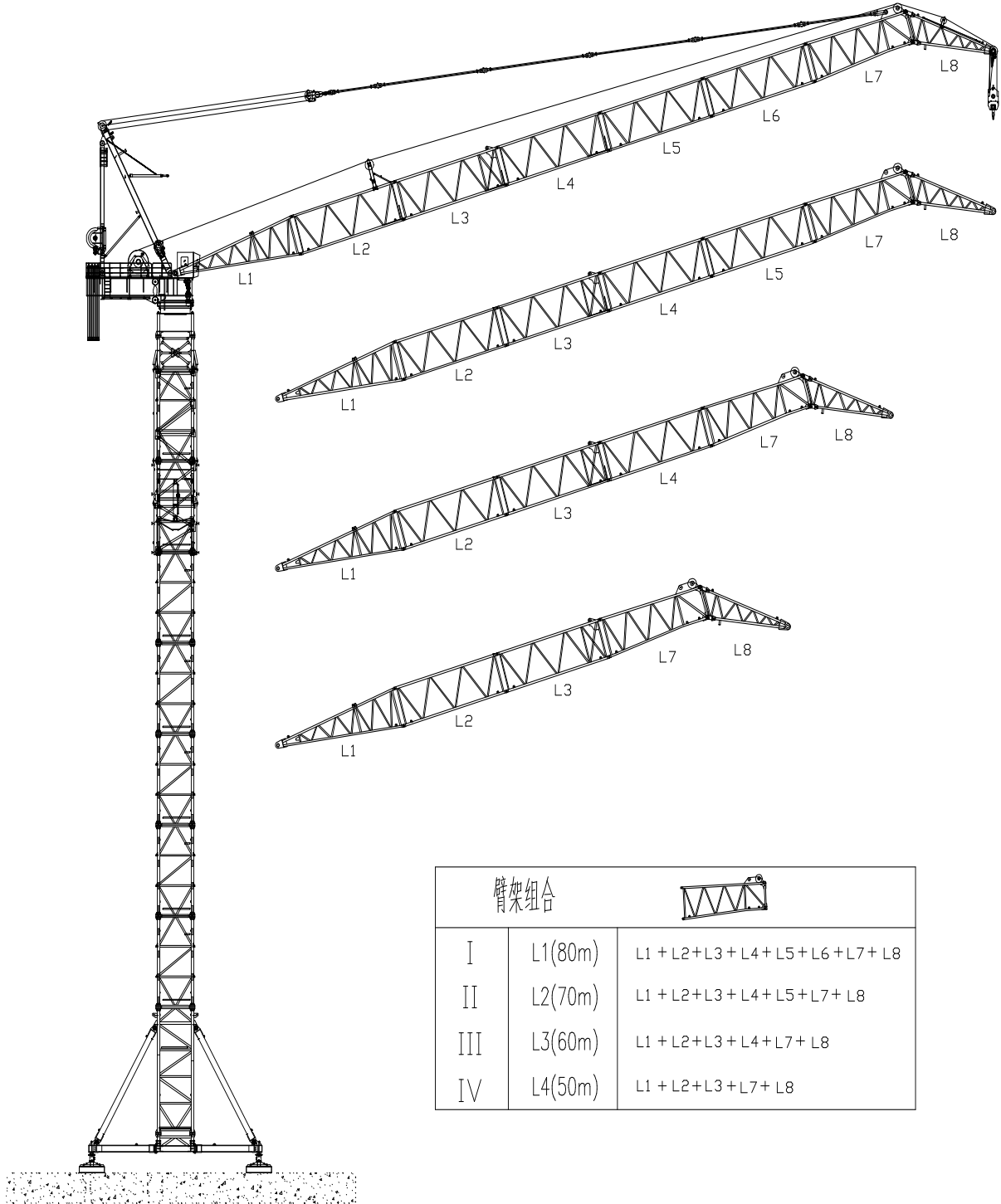
Intelligent remote control system (Including ground remote operation)

Bottom Cross Beams & Bottom Section (Bottom preinstallation suit)

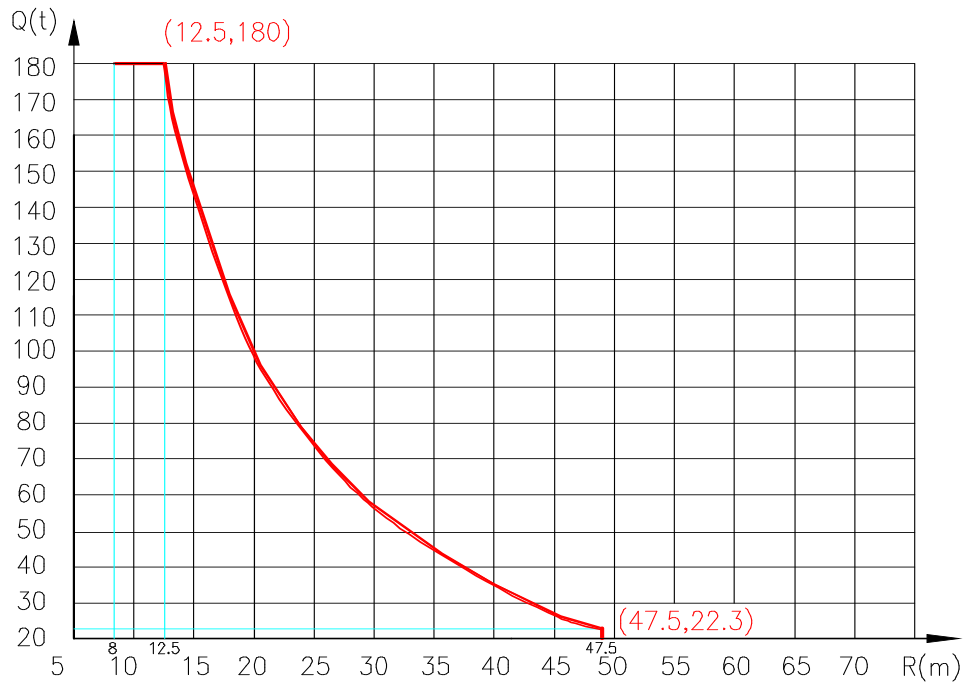
Customized transport vehicle (for site to site transportation)

Tower crane load test suit

JLD2250 Boom Combinations & Torque Curves

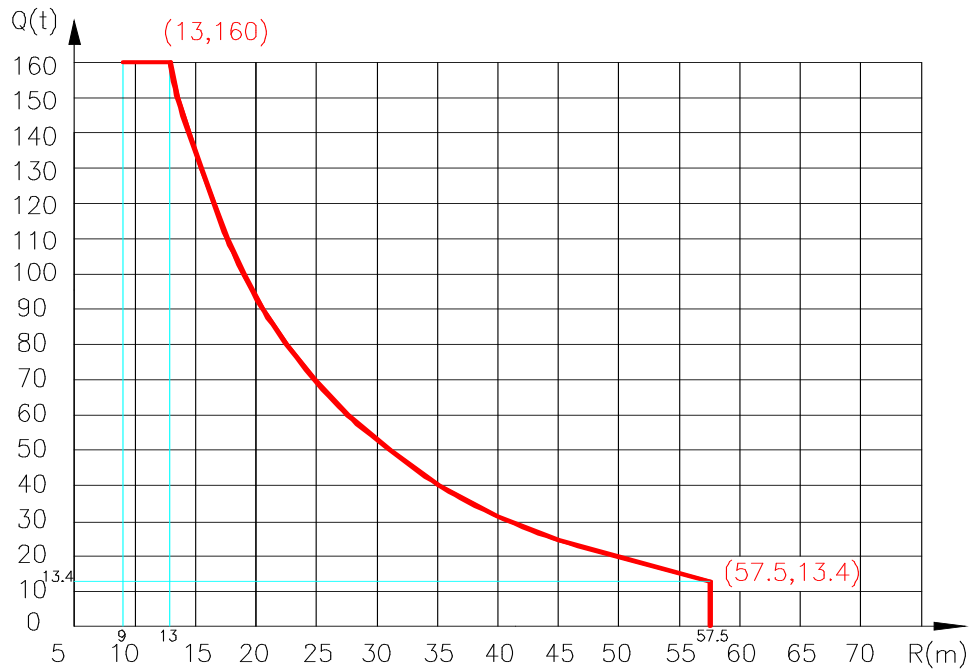


JLD2250 50m Boom & Torque Curve



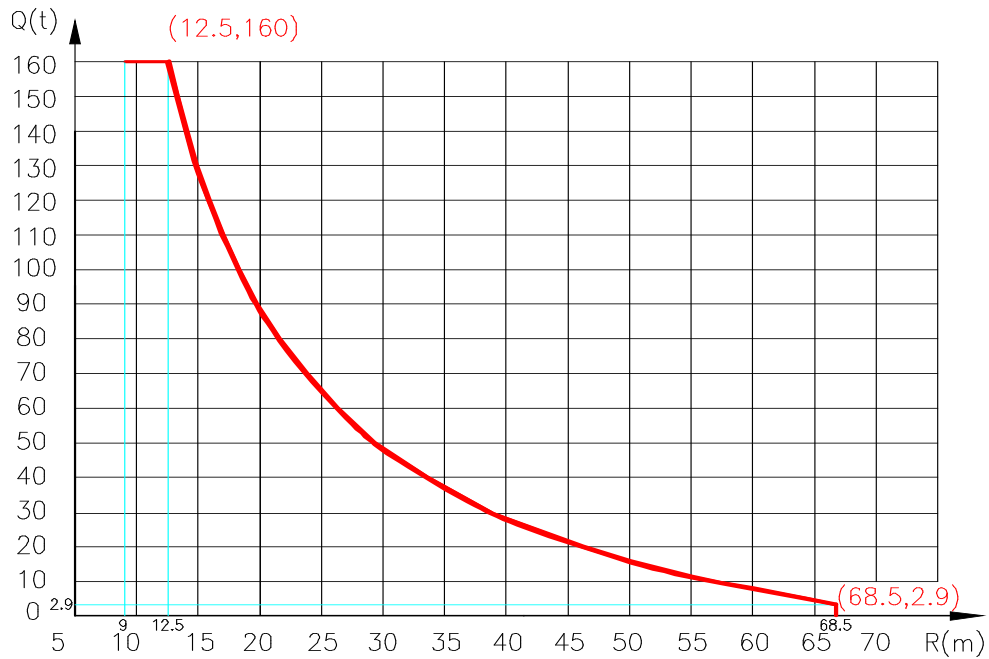
| Radius (m) | Boom Angle (Degrees) | Capacity (t) |
|------------|----------------------|--------------|
| 8.5 | 84.9 | 180 |
| 10 | 83.2 | 180 |
| 12.5 | 80.2 | 180 |
| 15 | 77.2 | 145.2 |
| 17.5 | 74.2 | 121.1 |
| 20 | 71.1 | 102.2 |
| 22.5 | 67.9 | 87.5 |
| 25 | 64.6 | 74.7 |
| 27.5 | 61.2 | 65.8 |
| 30 | 57.7 | 57.8 |
| 32.5 | 54 | 51.1 |
| 35 | 50.1 | 45.3 |
| 37.5 | 45.9 | 40.2 |
| 40 | 41.3 | 35.9 |
| 42.5 | 36.2 | 32 |
| 45 | 30.1 | 28.5 |
| 47.5 | 22.2 | 23 |
| 48.5 | 17.9 | 20.2 |

JLD2250 60m Boom & Torque Curve



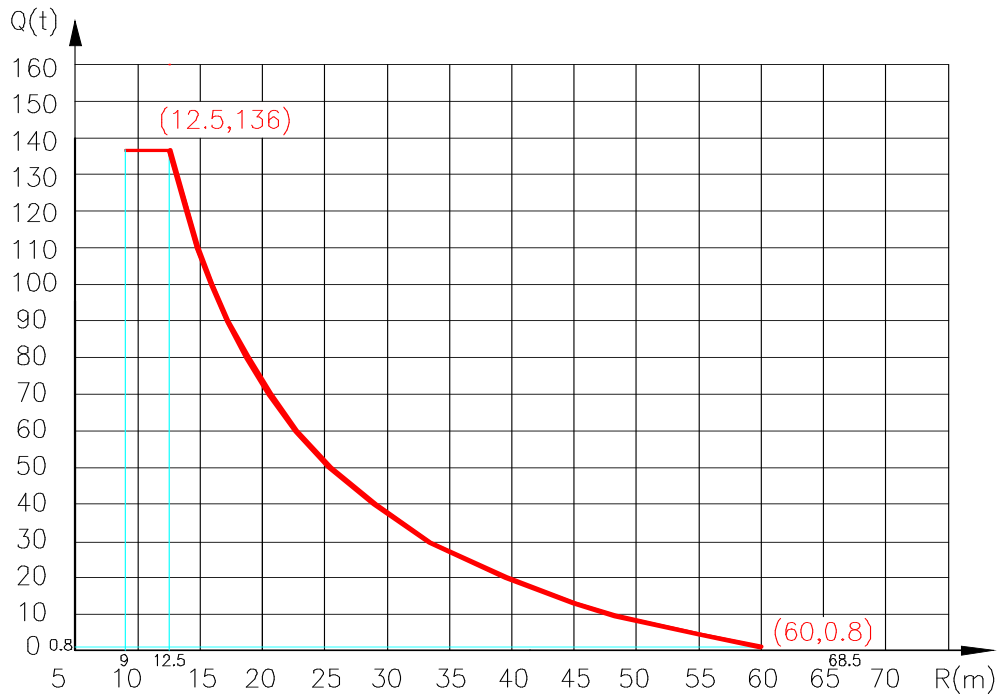
| Radius (m) | Boom Angle (Degrees) | Capacity (t) |
|------------|----------------------|--------------|
| 8.5 | 85.8 | 160 |
| 10 | 84.4 | 160 |
| 12.5 | 81.9 | 160 |
| 15 | 79.5 | 134.9 |
| 17.5 | 77 | 111.9 |
| 20 | 74.5 | 94.3 |
| 22.5 | 72 | 80.7 |
| 25 | 69.3 | 69.8 |
| 27.5 | 66.7 | 61 |
| 30 | 64 | 53.5 |
| 32.5 | 61.2 | 47.2 |
| 35 | 52.3 | 41.8 |
| 37.5 | 52.2 | 37.1 |
| 40 | 48.9 | 33 |
| 45 | 41.6 | 26.1 |
| 50 | 32.9 | 20.6 |
| 55 | 20.6 | 16 |
| 58.5 | 16.8 | 11.6 |

JLD2250 70m Boom & Torque Curve



| Radius (m) | Boom Angle (Degrees) | Capacity (t) |
|------------|----------------------|--------------|
| 9 | 87 | 160 |
| 10 | 86.2 | 160 |
| 12.5 | 84.1 | 160 |
| 15 | 82 | 128.7 |
| 17.5 | 79.9 | 105.4 |
| 20 | 77.7 | 88.5 |
| 22.5 | 75.5 | 75.2 |
| 25 | 73.4 | 64.5 |
| 27.5 | 71.1 | 55.9 |
| 30 | 68.9 | 48.6 |
| 35 | 64.2 | 37.3 |
| 40 | 59.3 | 28.3 |
| 45 | 54.1 | 21.7 |
| 50 | 48.4 | 16.4 |
| 55 | 42.2 | 12 |
| 60 | 34.8 | 8.4 |
| 65 | 25.4 | 5.3 |
| 68.5 | 15 | 3 |

JLD2250 80m Boom & Torque Curve



| Radius (m) | Boom Angle (Degrees) | Capacity (t) |
|------------|----------------------|--------------|
| 10.8 | 85.2 | 136 |
| 12.5 | 84 | 136 |
| 15 | 82.2 | 108.3 |
| 17.5 | 80.4 | 88.6 |
| 20 | 79.5 | 73.6 |
| 22.5 | 76.7 | 61.9 |
| 25 | 74.8 | 52.5 |
| 27.5 | 73 | 45 |
| 30 | 71 | 38.6 |
| 32.5 | 69.1 | 33.2 |
| 35 | 67.2 | 28.6 |
| 37.5 | 65.2 | 24.6 |
| 40 | 63.1 | 21.1 |
| 45 | 58.9 | 15.2 |
| 50 | 54.5 | 10.5 |
| 55 | 49.8 | 6.6 |
| 60 | 44.7 | 3.4 |

JLD1700/136t Tower Crane

Parameters

Power Supply 320kW Diesel Generator

Mechanism Power

| | |
|--------------------------|--------|
| Lifting Winch | 160kW |
| Luffing Winch | 90kW |
| Slewing Winch | 2×15kW |
| Hydraulic Jacking | 2×45kW |
| Standard Section Lifting | 37kW |

Speed

| | |
|--------------------------|------------|
| Lifting | 0-15m/min |
| Luffing | 4min |
| Slewing | 0-0.5r/min |
| Hydraulic Jacking | 0-1m/min |
| Standard Section Lifting | 0-10m/min |

Capacity

| | |
|-----------------------------|----------|
| Rated Load Moment | 1700 t·m |
| Max. Lifting Load | 136t |
| Radius at Max. Lifting Load | 9-12.5m |
| Max. Lifting Height | 183.5m |
| Max. Lifting Radius | 68.5m |

Other Parameters

| | |
|----------------------------------|---------------------|
| Rear-end Swing Radius | 8.5m |
| Foundation Capacity Requirements | 200KPa |
| Working Wind Pressure | 250N/m ² |
| Non-Working Wind Pressure | 800N/m ² |
| Dead Weight | 675t |
| Min. Working Temperature | -20°C |
| Min. Non-working Temperature | -40°C |

Dimensions , Weights & Mounting Height

| | | |
|---|------------|-------|
| Substrates | | |
| 7.02m × 2.42m × 0.5m | 4×10.86t | 0m |
| Bottom Cross Beams | | |
| 21.75m × 3.88m × 1.51m | 19t | 2m |
| Bottom Section | | |
| 10.5m × 3.8m × 3.8m | 21t | 12.4m |
| Standard Section | | |
| 7.5m × 3.5m × 3.5m | 13 × 17.5t | 27.4m |
| Climbing System | | |
| 15.22m × 4.1m × 5.1m | 42t | 43m |
| Transition Section + Standard Section Lifting | | |
| 9.31m × 4.1m × 2.7m | 19t | 29.6m |
| Front Deck+Slew Mount Unit | | |
| 4.45m × 5.6m × 3.3m | 38t | 35.2m |
| Rear Deck+Lifting Winch+Electrical System | | |
| 6.5m × 4.7m × 3.3m | 38t | 35.7m |
| Counter Weight | | |
| 7.5m × 3.46m × 0.24m | 4 × 30t | 35.2m |
| Mast Assembly+Luffing Winch | | |
| 14m × 3.55m × 3m | 25t | 48.7m |
| Boom Bottom Section | | |
| 40m × 3.4m × 3.4m | 20t | 43m |
| Boom Top Section | | |
| 32m × 3.2m × 3.2m | 22t | 45.5m |

Accessory Options

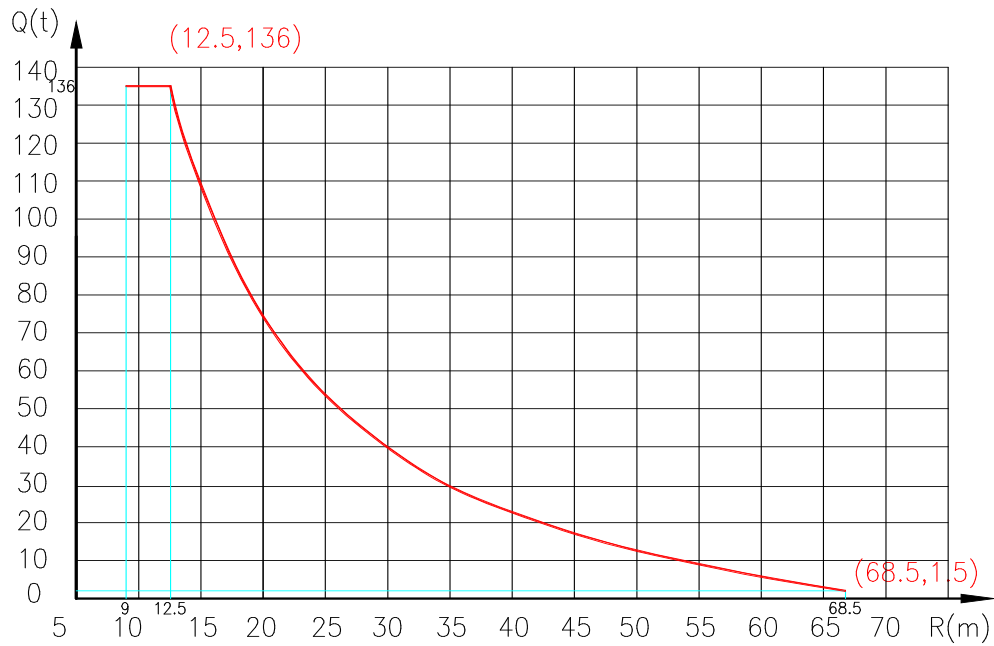
Intelligent remote control system (Including ground remote operation)

Bottom Cross Beams & Bottom Section (Bottom preinstallation suit)

Customized transport vehicle (for site to site transportation)

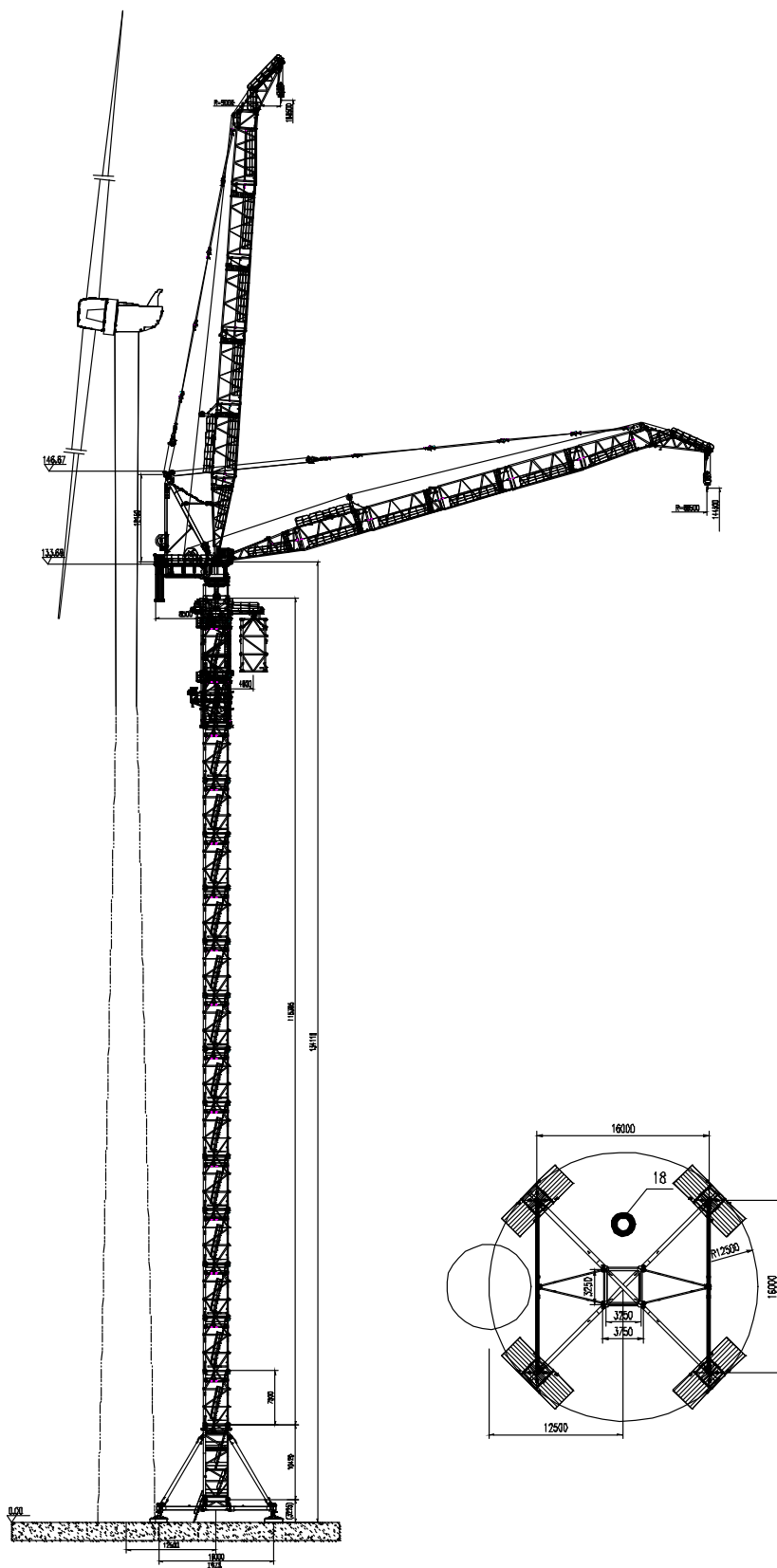
Tower crane load test suit

JLD1700 70m Boom & Torque Curve



| Radius (m) | Boom Angle (Degrees) | Capacity (t) |
|------------|----------------------|--------------|
| 9 | 87.0 | 136 |
| 10 | 86.2 | 136 |
| 12.5 | 84.1 | 136 |
| 15 | 82.0 | 107.7 |
| 17.5 | 79.9 | 88.1 |
| 20 | 77.7 | 73.5 |
| 22.5 | 75.5 | 62.1 |
| 25 | 73.4 | 53 |
| 27.5 | 71.1 | 45.6 |
| 30 | 68.9 | 39.4 |
| 35 | 64.2 | 29.7 |
| 40 | 59.3 | 22.3 |
| 45 | 54.1 | 16.6 |
| 50 | 48.4 | 12.1 |
| 55 | 42.2 | 8.3 |
| 60 | 34.8 | 5.2 |
| 65 | 25.4 | 2.9 |
| 68.5 | 15 | 1.5 |

Full Form of High Tower Structure Combination



Applications of Full Form Structure Combination



Vestas 3.3mw-142m Wind Farm in Jiangsu LongQiu



Vestas 3.3mw-137m Wind Farm in Jiangsu ZhouShan

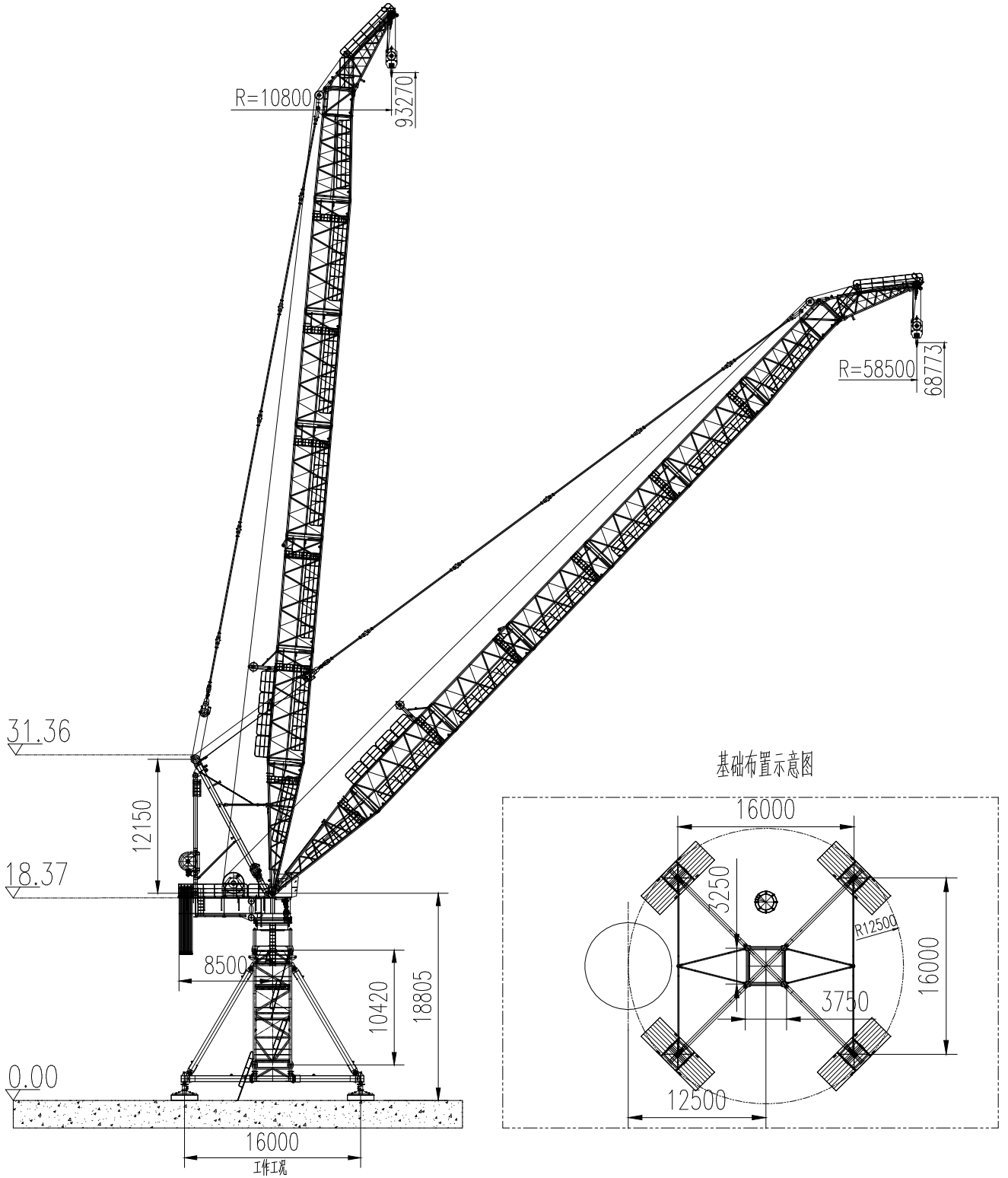


Vestas 3.3mw-152m Wind Farm in Jiangsu Xianfeng



GE 3.0mw-132m Wind Farm in Henan Nanyang

Low Height Structure Combination of Mountain Wind Power



Applications of Mountain Wind Power



2.0mw-85m Mountain Wind Farm in Henan



2.0mw-85m Mountain Wind Farm in Henan



2.0mw-95m Mountain Wind Farm in Shanxi



2.0mw-95m Mountain Wind Farm in Shanxi

Applications of Small platform



Vestas 3.3mw-137m Wind Farm in Jiangsu ZhouShan



Vestas 3.3mw-142m Wind Farm in Jiangsu
Longqiu



Vestas 3.3mw-152m Wind Farm in Jiangsu
Xianfeng

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