

Hydraulic Mobile Cranes

Product knowledge guidebook



1 CLASSIFICATION AND CHARACTERISTICS OF MOBILE CRANES

Classification

Mobile cranes	Wheel-mounted	(1) Truck crane (2) Rough terrain crane (3) All terrain crane (4) Truck loader crane
	Crawler-mounted	(5) Lattice boom crawler crane (6) Telescopic boom crawler crane
	Specially-mounted	

Characteristics

(1) Truck crane



Crane is mounted on a truck chassis with two cabs being provided; one for crane operator and the other for truck driver. There are two kinds of truck chassis: - One specially prepared for crane and the other general-purpose carrier having a crane on its chassis in place of body for cargo.

(2) Rough terrain crane



Crane is mounted on a specialized wheel carrier, having only one cabin where both traveling and crane operation are performed. Its very small turning radius makes this crane easy-to-operate in confined area in town.

(3) All terrain crane



Crane adaptable to any kind of road surfaces, which can cover any travel conditions from an off-road traveling through high-speed traveling on a paved road. Because of its high crane capacity and excellent agility, this crane is used for works requiring high crane capacity in a narrow site.

(4) Truck-loader crane



In the front of the truck body for cargo, a smaller sized crane is mounted, which enables one-man operation of cargo loading, unloading and transportation.

(5) Lattice boom crawler crane



Crane is mounted on a carrier of crawler type with crane unit and lattice boom and characterized that it can be used even on a soft ground. Because of its wide crawler bearing area and small ground contact pressure, this crane can be used even on a soft ground, but can travel only at a low speed.

(6) Telescopic boom crawler crane



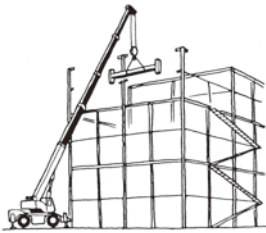
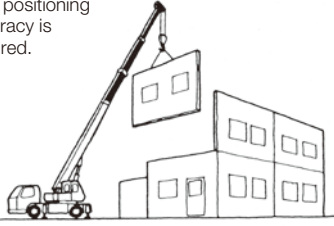


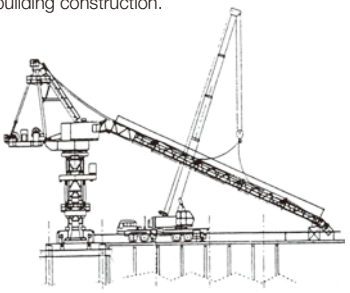
Crane is mounted on a carrier of crawler type with crane unit and hydraulic telescopic boom. In addition to the characteristics of the lattice boom crawler crane, its hydraulic telescopic boom allows more speedy and efficient crane operations.

2 USAGE OF MOBILE CRANES

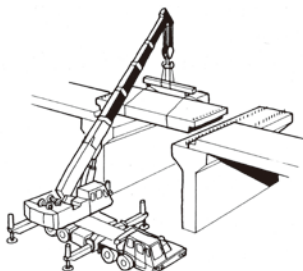
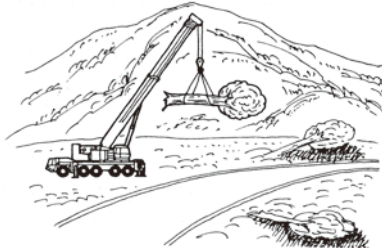
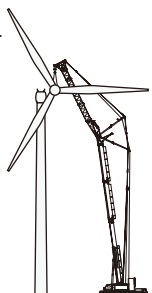
The usage of rough terrain cranes and all terrain cranes is mainly construction works for civil engineering and construction, but these cranes are also used for plant works, heavy object installation, disaster recovery, accident handling, harbor loading and unloading, etc.

[1] Construction works



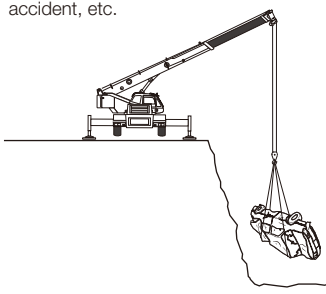
A construction work is planned on assumption that a crane is used. The choice between a mobile crane or fixed crane depends on the construction conditions (the lifting height, installation space, etc.), construction period, costs, etc.

<p>● Erection method using steel frames</p> <p>Used for lifting and assembling steel frames for a building (office, store, and housing), plant, warehouse, large structure (stadium, steel tower, etc.). High positioning accuracy for bolts is required.</p>  <p>In construction of a building, a mobile crane is often used provided that the required lifting height is satisfied with sufficient installation space.</p> <p>A fixed crane is advantageous in terms of the lifting height and installation space, but requires assembling and disassembling works and completion inspections.</p>	<p>● Prefabrication erection method and wooden erection method</p> <p>Used for lifting and assembling steel frames, panels, members in the prefabrication method, conventional construction method, and other. High positioning accuracy is required.</p> 	<p>● Lifting of materials and installation</p> <p>Used for lifting loads such as steel frames, shuttering materials, floor materials (deck plates, ALC, and PC boards), wall materials (ALC and PC boards), and roof materials.</p> 
	<p>● Equipment works</p> <p>Used for installation of equipment for power receiving, plumbing sanitary, air conditioning, etc. When a crane is placed on the roof, a jib is frequently used.</p> 	<p>● Assembling and disassembling of jib crane</p> <p>Used for assembling and disassembling of a jib crane for building construction.</p> 

[2] Civil works

<p>● Bridge construction</p> <p>Used for construction of girders of a bridge. A high crane capacity is required.</p> 	<p>● Loading and unloading of materials and installation at civil work site</p> <p>Used for lifting operations in civil works for subways, electric railroads, rivers, harbors, roads, water supply sewerage system, and landscape gardening, etc.</p> 	<p>● Construction of wind power generator</p> <p>Used for installation works of a wind turbine and other for a wind power generator.</p> 
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[3] Other works

<p>● Construction and maintenance of plants</p> <p>Used for construction and maintenance of plants for chemicals, iron and steel, heavy electrical equipment, etc.</p> 	<p>● Installation of heavy object</p> <p>Used for installation of general machinery including a machine tool, electric machinery, etc. Because of an indoor work, a crane with low overall height and short boom length at full retraction is required.</p> 	<p>● Accident handling</p> <p>Used for removal of a vehicle affected by an accident, etc.</p> 
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