

# 绞盘升降龙门架使用说明书

## Operation Manual



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## 一、简述

警告：操作者在使用门吊前必须仔细阅读本说明书，并严格按本说明书中的操作步骤操作。违规操作，将会造成严重后果。

Warning: The user should read this manual carefully before operating this crane. The operation should be followed this manual.

有下列情况之一者，严禁起吊：

In case of bellow cases, the crane is prohibited being used.

①被吊重物质量超过本机允许值范围； The load object excess the rated capacity.

②吊物下方有人 People is bellow the load.

③吊物上方站人 Please is above the load.

④起吊埋在地下物 The load is buried in the ground.

⑤斜拉斜牵重物 Tilt lifting.

⑥吊装绳与重物连接不牢； Load is not properly hooked.

⑦六级以上强风； 6 and above degree wind.

⑧索具不牢固。 Rigging part is not properly installed.

## 二、用途及构造

### Application and Structure

此起重机主要用于装配车间、机加工车间、模具装配、科研实验室、维修保养车间、小型货运站、仓库、汽修厂等场所的吊装作业及货物搬运。

This crane is mainly designed for material handling work in the assembling workshop, machining workshop, mold assembly, research laboratory, maintenance, small cargo terminal, warehouse, car repair center, etc.

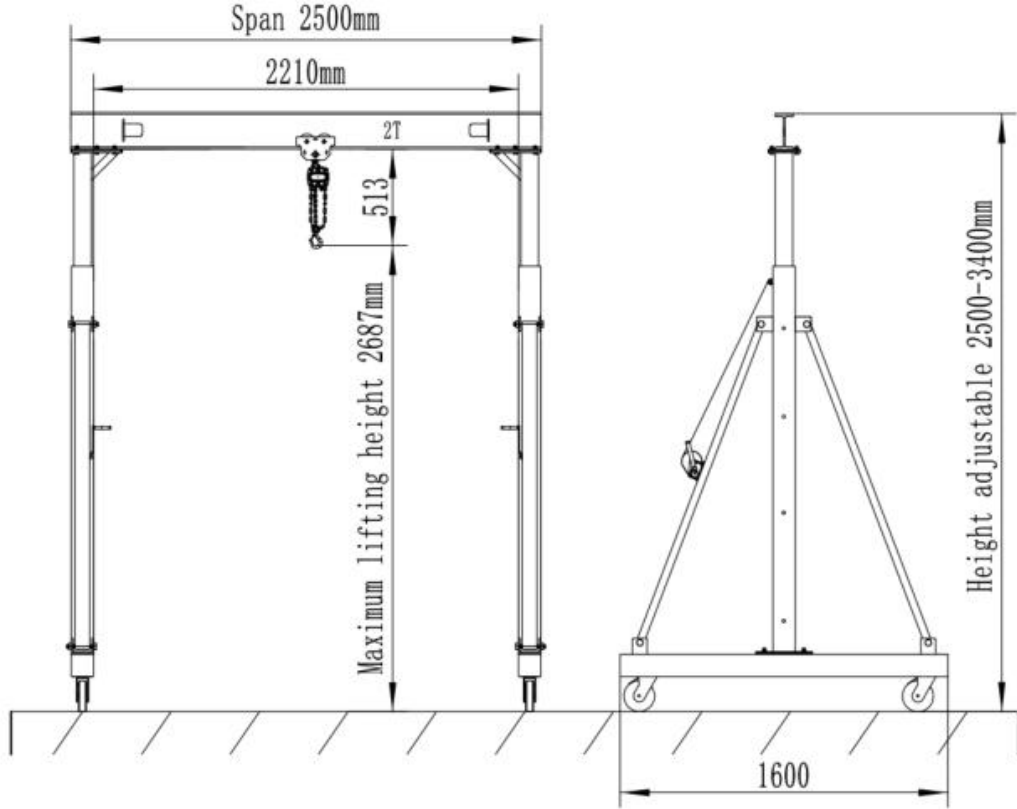
该机主要由行走系统、钢结构架系统、电气控制系统、起升系统等组成。行走系统分为脚轮式、钢轨式、电动行走式。钢结构架分为完全可拆卸式和局部可拆卸式。起升系统根据客户需求选配手拉葫芦或者电动葫芦及其他起重设备。

The crane contains travelling system, steel structure, control system, hoist system. The travelling system can be divided by castor wheel type, rail type and electrical drive type. The steel structure can be full or part disassembly. The hoist can be electrical hoist or manual chain block.

该机结构简单、拼装方便、操作容易。

### 三、主要技术参数

#### Main technical data



- 1、额定起重量 capacity:  1t  2t  3t  5t  10t
- 2、跨 度 Span S1: \_\_\_\_\_mm
- 3、整机高度 Total height H1: \_\_\_\_\_mm
- 4、运行方式 Drived by: 手动  电动
- 5、工作风力 wind degree: ≤6 级

## 四、安装注意事项及拼装顺序

### Safety and Installation

门吊安装时，应注意以下几点：

Take notes before installation

- 1、起重机运输至现场后，首先按货物清单清点零部件，检查各构件在运输过程中，有无损坏和变形，若有则必须于地面修复后才能组装和架设。Once the crane has been shipped to the destination, check according to the packing list to see if any damages or deforms. If yes, try to repair it.
- 2、将立柱和支腿水平放置用螺栓将两法兰连接，但不上紧。
- 3、将拉撑的两端分别用螺栓与立柱和支腿连接并上紧，然后再将上步骤未上紧的螺栓上紧，然后将钢丝绳装好。
- 4、将其余的立柱、支腿和拉撑按照上两步骤安装到位。**并将两支腿的内芯和外管用吊装带连接到一起以防在吊装过程中发生滑动，以防造成不必要的损坏，产生安全隐患。**
- 5、将吊装带系与立柱中间，然后用吊车或龙门架吊着吊装带缓慢起升使龙门架垂直于地面，足够对接横梁与立柱法兰即可，然后将横梁倾斜如图所示放置离开地面一侧垫上东西使横梁不至于悬空载将横梁与立柱的两法兰对接并用螺栓上紧，安装完毕后将吊车或龙门架的吊钩缓缓放下，并取下吊装带。
- 6、再用吊车或龙门将另外一侧的横梁与安装好的立柱如上步骤安装，完毕后取下吊装带
- 7、用吊装带系与横梁中间并用吊车或龙门架吊着吊装带缓慢起升直至龙门架立于地面，取下吊装带。**吊装之前检查好各个位置的连接及安装。**

8、将所使用葫芦挂至横梁，至此所有安装均已完成。

注：安装过程中注意安全，安装场地除了安装人员其余人均远离安装场地以防发生意外，安装中如有问题应及时联系厂家，寻找解决办法。安装步骤仔细阅读，谢谢观看。

安装人员配备及起重工具：4个人或多人（按照安装现场具体情况配备）、一台龙门架或吊车、多条吊带

友情提示：龙门架负重工作时应插好销轴，钢丝绳只是起升降龙门架本身的重量，不具备提升重物的强度。根据龙门架上的提示安全操作。

## 五、起重机试车

### Commissioning

- 1、切断全部电源 Shut off the electricity supply.
- 2、检查各紧固件是否牢固，各金属结构有无变形。Check if all fasteners are all well fixed. Check if there is any deforming of the steel structure.
- 3、空载运行起重机，检查有无异常现象。 Make lifting without loading to check if any abnormal happens.
- 4、静负载试车：负载额定重量，在横梁上行走，将起重小车开到跨中，将重物升到一定高度（离地面约 100mm），静置 10 分钟；如此连续实验三次，且第三次卸掉负荷后，横梁不得有残余变形。Static test: drive the hoist to the middle of the beam with loading. Keep the lifting object to certain height (100mm above the floor) for 10 minutes. Start over this test by three times. Unloading the object and check the beam. The beam is not allowed to have any deformation.
- 5、动负载试车：静负载试车合格后，方可进行动负载试车。Dynamic loading test: The dynamic loading test can only be done once the static test passes.
- 6、起重机负载额定重量做反复起升和下降制动试车，然后开动小车左右来回行走 3~5 次，并反复制动和启动。此时机构的制动器、限位器、电气操作应可靠，准确和灵活，车轮不打滑，机架震动正常，机构运转平稳，卸载后机构和机架无残余变形。Put rated loading to the hoist. Repeat lifting and lowering. Drive the trolley to the left and right along the beam by 3-4 times. Repeat the brake and starts. During the testing, the brake, limit switch, pendant control should be accreted. No skidding of the wheels. The vibration should be normal. All traveling should be smoothly. After unloading, the structure should be no deformation.



各项试验合格后，可安全使用。 All tests have been finished and passed, the crane can be put into using.

## 六、起重机安全操作

### Safety Rules and Operation

1、起重机操作人员应熟悉本机的结构特点和操作方法。 The operator should be familiar with the features and the way of operation of the crane.

2、每班第一次吊运物品以使吊运接近额定载荷的物品时，应先将重物起升至不超过 0.5 米，然后下降到接近地面时制动。 For the first lifting operation of each work shift, should not

3、禁止超负荷使用 No overloading.

4、禁止倾斜吊运物品 No tilt lifting.

5、禁止人随物品一起升降。 No lifting people.

6、不允许长时间吊重物于空中停留，起重机吊装重物时，操作人员不得离开。 Load staying on the hook for long time under power off is not allowed.

7、禁止在横梁上放工具、零件等物品，以免坠落伤人。 Tools are not allowed to put on top of the beam in case of hurting if falling down.

8、突然断电时，要将所有控制手柄转至零位。 In case of main power is off, all control switches should set to zero.

9、不工作时，应当踩下刹车，防止滑溜。 When the crane is not at stage of work, the wheels should be braked.

10、禁止六级以上风力工作。 The crane is not allowed to be used when the wind is 6 degree and above.

11、确认所有的都安全了，用遥控器操作将葫芦提升到安全距离后，继续操控遥控器将龙门吊跨到被吊物上，葫芦运行到横梁中间，然后摇动两侧的绞盘，取下立柱上的销轴，两侧继续同时摇动绞盘到指定高度，

两侧均插好销轴，松开绞盘使立柱内芯落到销轴上，使销轴负重。放下葫芦吊钩挂到被吊物上，或者用吊装带固定到被吊物上，葫芦吊钩挂到吊装带上，就可以提升了。当龙门吊需要横向移动时摇动底梁上的升降摇轮使电行走机构离开地面，手推龙门吊就可以了。Verify that all the hoists are safe. After lifting the hoists to a safe distance with the remote control operation, continue to control the remote control to lift the gantry to the suspended object. The hoists move to the middle of the beam, then shake the winches on both sides, remove the pins on the columns, continue to shake the winches at the same time to the specified height, insert the pins on both sides, loosen the winches so that the inner core of the columns falls on the pins to the pins. Axle load. Put down the hoist hook and hang it on the suspended object, or fix it on the suspended object with the hoisting belt. The hoist hook can be lifted by hanging it on the hoisting belt. When the gantry crane needs to move horizontally, it shakes the elevation of the bottom beam. The rocker pulls the electric walking mechanism away from the ground, so that the gantry crane can be pushed by hand.

## 七、润滑保养

### Lubrication and Maintenance

1、起重机各机械的使用质量和寿命，很大程度上取决于经常和正确的润滑。因此应该对起重机的行走机构和升降机构定期润滑。The performance quality and life of the crane is decided, to some extent, by the lubrication work. The motion parts such as the long travelling system and hoisting system should be lubricated periodically.

2、使用钢丝绳时，应注意钢丝绳断裂情况，如有断丝断股和磨耗量达到报废标准时，应更换新绳，并定期用油脂润滑钢丝绳。 Lubricate the wire rope periodically. Change new wire rope if any strand is broken or the wire rope reaches discard standard.

3、吊具必须定期检查。 Hoist device should be inspected periodically.

4、定期检查轮缘和踏面，当轮缘部分的磨损或崩裂达到 30%厚度时，更换新轮。 The flange and thread of the wheel should be inspected periodically. Change new wheel if the flange abrasion or breakage excess 30% of the thickness.

5、起升机构的制动器应牢固的支承额定载荷的 1.25 倍(下降制动时)，运行机构的制动器应调到及时闸住机构的运行，又不发生打滑为原则。 The hoist braking system should be set to 1.25 times of the rated capacity(braking during lowering). The travelling braking system should be set to the point when the braking is functional but no slipping.