

# Installation and service manual

**FOUR-POST PARKING LIFT**



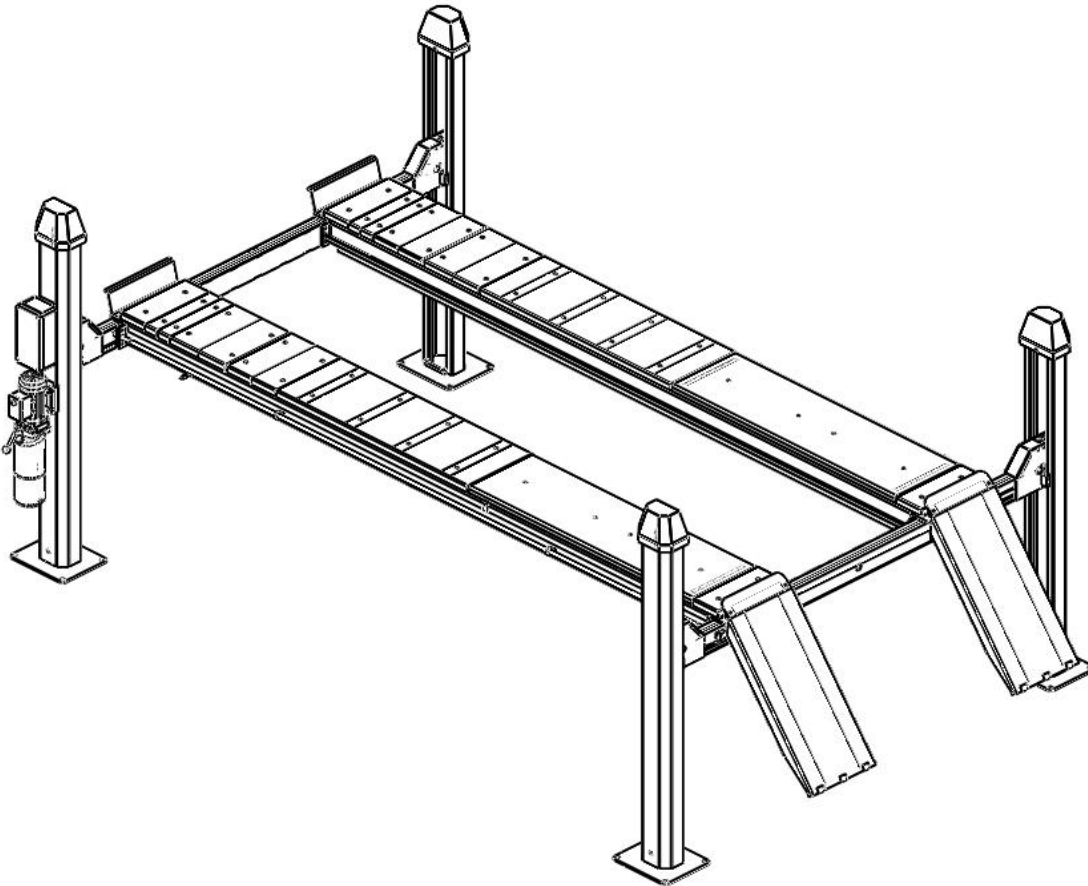
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# I. PRODUCT FEATURES AND SPECIFICATIONS

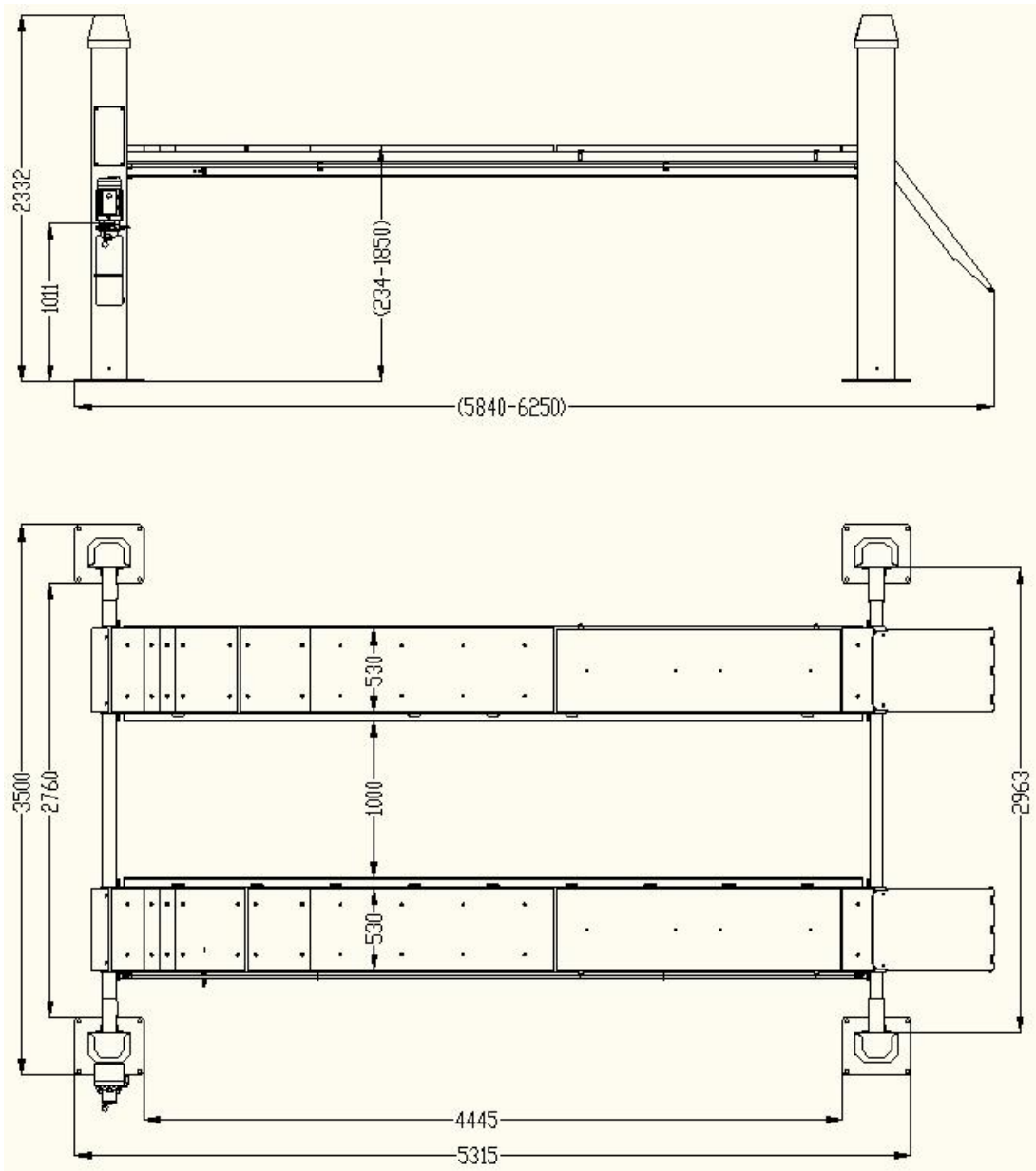
## 15000lbs KT-4H150 4-POST PARKING LIFT

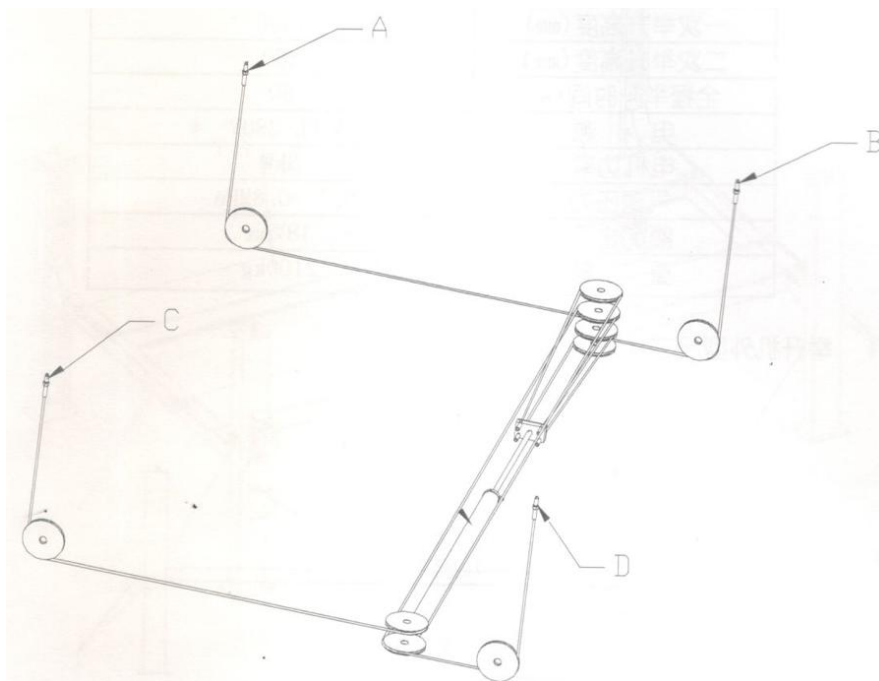
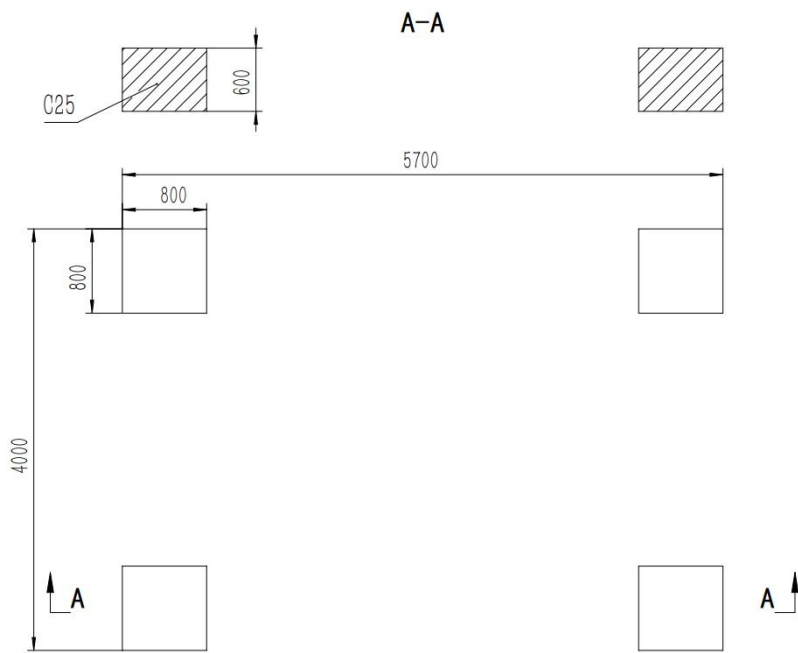
- Single point manual safety release.
- Four mechanical locking devices, each equipped with both primary and secondly safety locks.
- Powerside column can be installed at both side, front or rear.
- Anti-slipped diamond platforms and adjustable safety lockladders.
- Optional kits: Rolling jack with hand pump, Mobile set, Drip tray



**Fig.1**

Lifting Capacity	Lifting Height	Lifting Time	Overall Length(Incl. Ramps)	Overall Width	Width Between Columns	Gross Weight	Motor
15000lbs (6.8T)	92.52" (2350mm)	60S	229.92" (5840mm)	138.80" (3500mm)	116.65" (2963mm)	4850.17lbs (2200kg)	3KW





## II. INSTALLATION REQUIREMENT

### A. REQUIRED TOOLS

Tape Measure (7.5m)



Hammer



Level Bar



English Spanner (12")



Wrenchset: (12#, 13#, 14#, 15#, 17#, 19#, 24#, 30#)



Carpenter's Chalk



Screw Sets



Pliers



Lock Wrench



socket Head Wrench: (3#, 5#, 6#, 8#)



Fig.2

### B. CONCRETE INSTRUCTION (See Fig.3)

Specifications of concrete must be adhered to the specification as following.

DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside. Keep this operation manual near the lift at all times. Make sure that ALL USERS read and understand this manual.

Concrete must be thickness 100mm minimum and without reinforcing steel bars, and must be aged at least 7 days before the installation.

1. All models MUST be installed on 3,000 PSI(210kg/cm<sup>2</sup>) concrete only conforming to the minimum requirements shown above.
2. Floors must be level and no cracks.



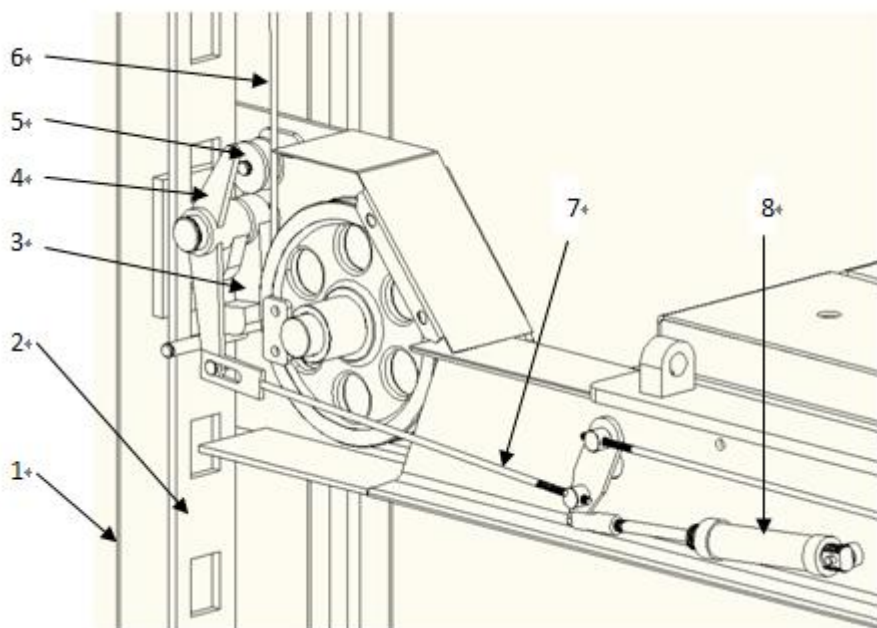
(See Fig.3)  
 Concrete must be of test strength 3000PSI(210kg/cm<sup>2</sup>).

**C. POWERSUPPLY**

The electrical source must be 2.2KW minimum. The source cable size must be 2.5mm<sup>2</sup> and in good condition of contacting with floor.

**D. Safety mechanism**

The safety mechanism of the lift machine is composed of a lock plate 2, a safety lock 4, an anti-break lock 3, a rope wheel 5, etc., and its protection functions are as follows:



**Safety Mechanism of Lift**

### 1. Safety protection device (see Figure above)

The lock plate 2 is suspended in the Column 1, and the safety lock 4 is placed in the beam. Press the raised button of the control box, and then the small cylinder 8 will get air and pull the safety lock 4 to withdraw it from the square hole of the lock plate 2. When the table rises to the required height, release the raised button, and the safety lock 4 extends under the action of the spring of the small cylinder 8. The table is lowered slightly, and the safety lock 4 enters the square hole of the lock plate 2, to ensure that the table stays safely at the required height for various maintenance operations.

When the workbench needs to be lowered, first raise the workbench a little, and the safety lock 4 is removed from the lock plate 2 under the action of small cylinder 8. After that, the workbench is lowered under the pressure of self-weight to complete the descending work.

### 2. Rope breakage protection (see Figure above)

The anti-break lock 3 is located in the beam, the roller 5 leans on the steel wire rope 6, and the roller 5 moves up and down along the tension steel wire rope 6, so that the roller 5 and the lock plate 2 always maintain a certain gap, when the steel wire rope 6 breaks, the roller 5 loses its support, rapidly turns clockwise under the pull of the spring, and the beam is locked on the lock plate, effectively avoiding the fall of the workbench.

## III. STEPS OF INSTALLATION

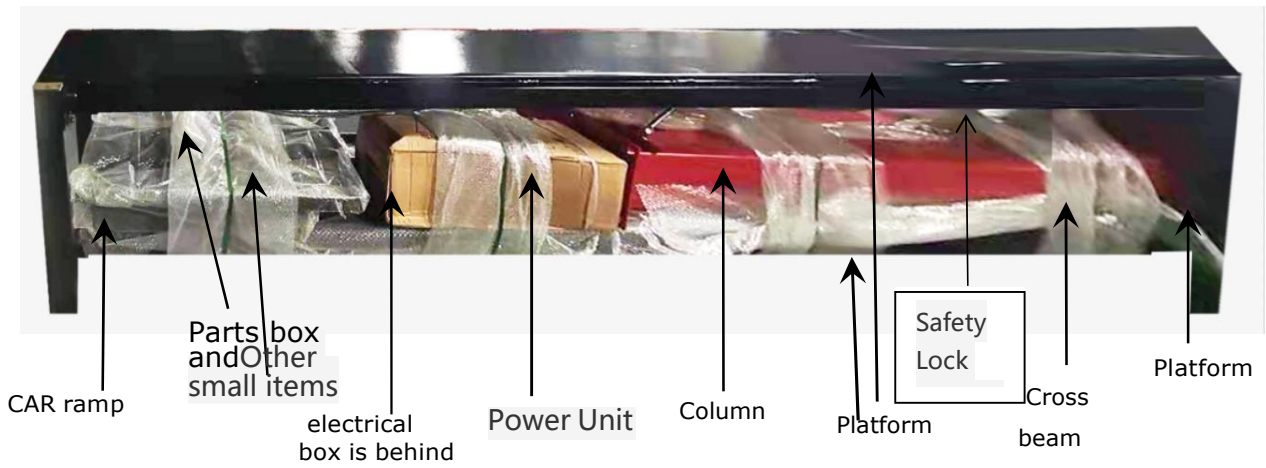
### A. Check the parts before assembly

1. Packaged lift and Hydraulic Power Unit (See Fig.4).



2. Open the outer packing carefully (See Fig.5).





**Fig.5**(Note: Parts may be located in different parts in different batches)

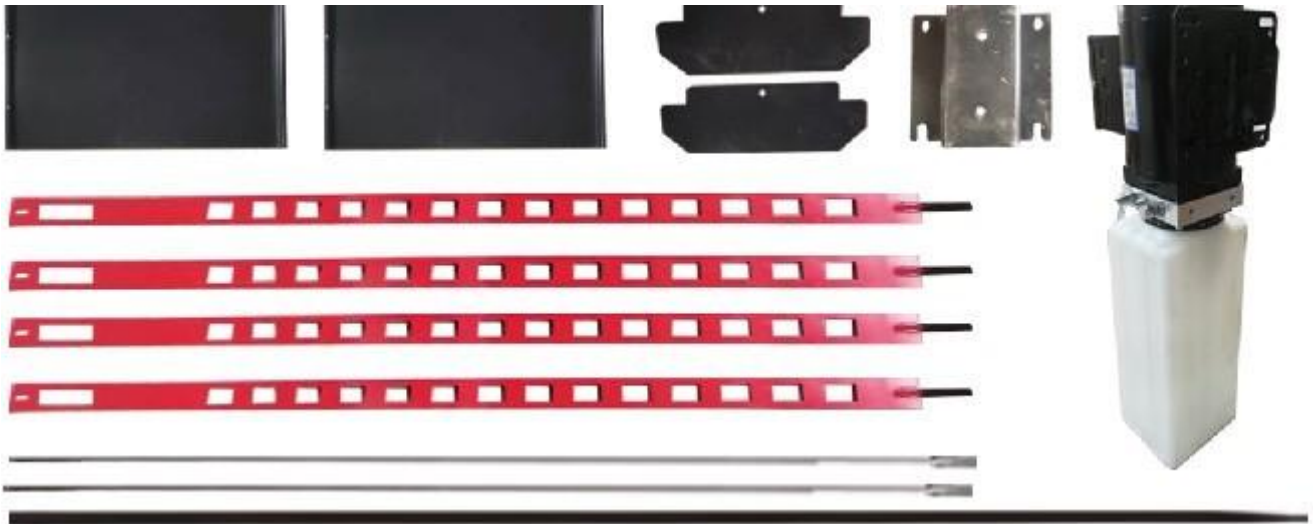
3. Take off the drive-in ramps and The platform above(See Fig.6).



4. Loosen the screws of the upper package stand, take off the off side platform, take out the parts inside the pack, then remove the package stand.

5. Move aside the parts and check the parts according to the shipment partslist

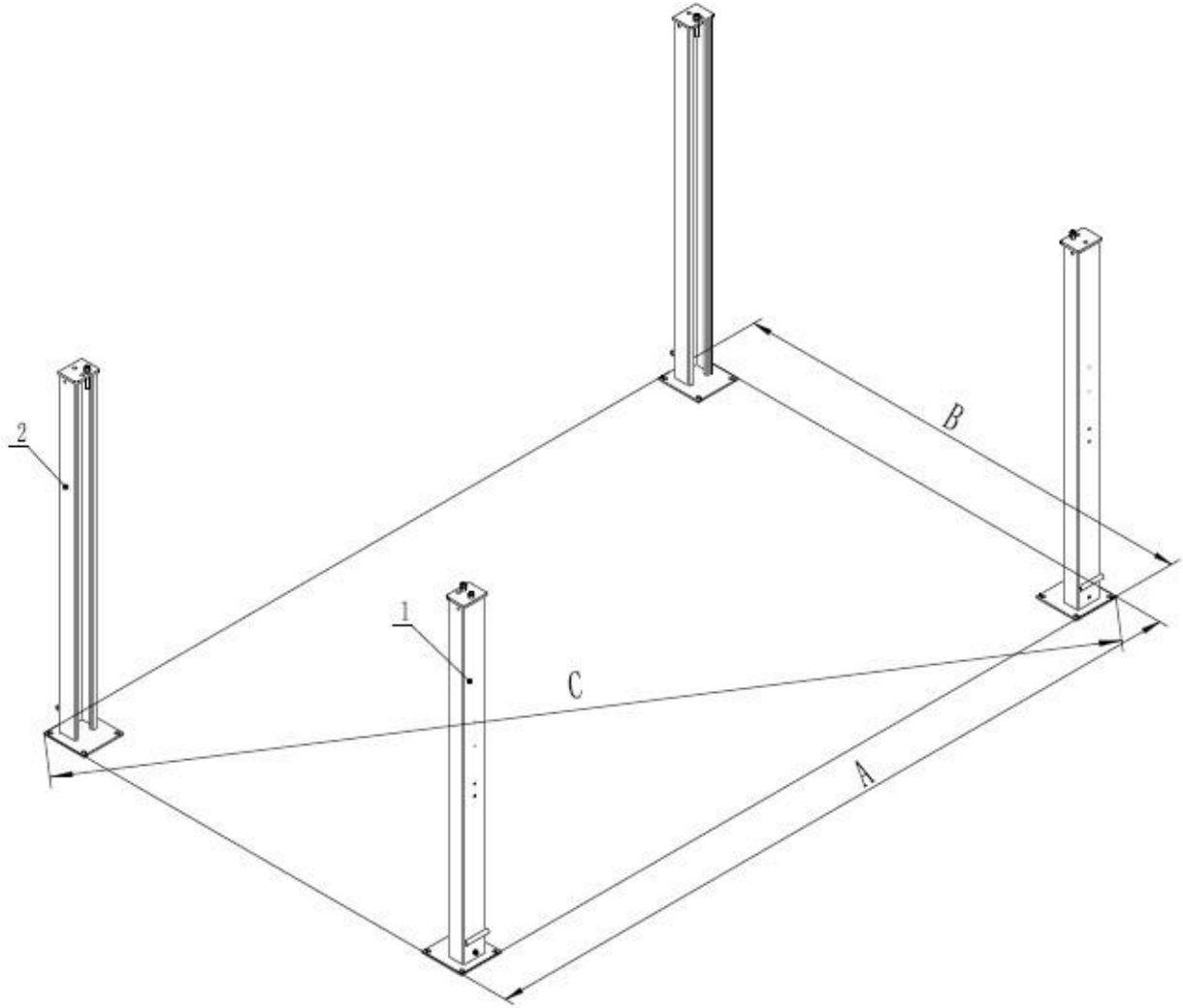
**(See Fig.7-See Fig.8).**



**Fig.7**

**B.** Use a carpenter’s chalk line to establish installation layout as per Table1 Make sure the size is right and base is flat (**see Fig.10**)

**Note: Reserve appropriate space in front and behind the installationsite.**



	<b>A</b>	<b>B</b>
15000l bs		
6.8T	5315mm 209.25"	3500mm 138.80"

### C. Install cross beams (See Fig.11, Fig.12).

Note: Pay attention that the crossbeam's slot should be positioned towards inward and the safety locks connecting assy. should be adjacent to the power unit column.

The powerside column need to be installed according to the installed position of the safety lock release handle.

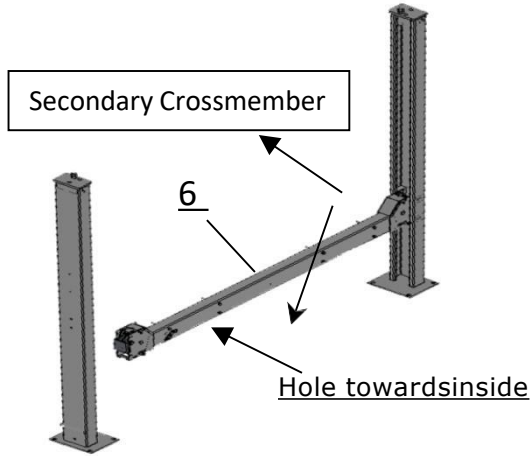


Fig.11

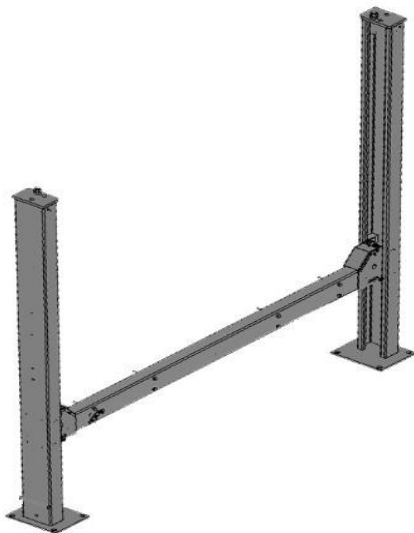
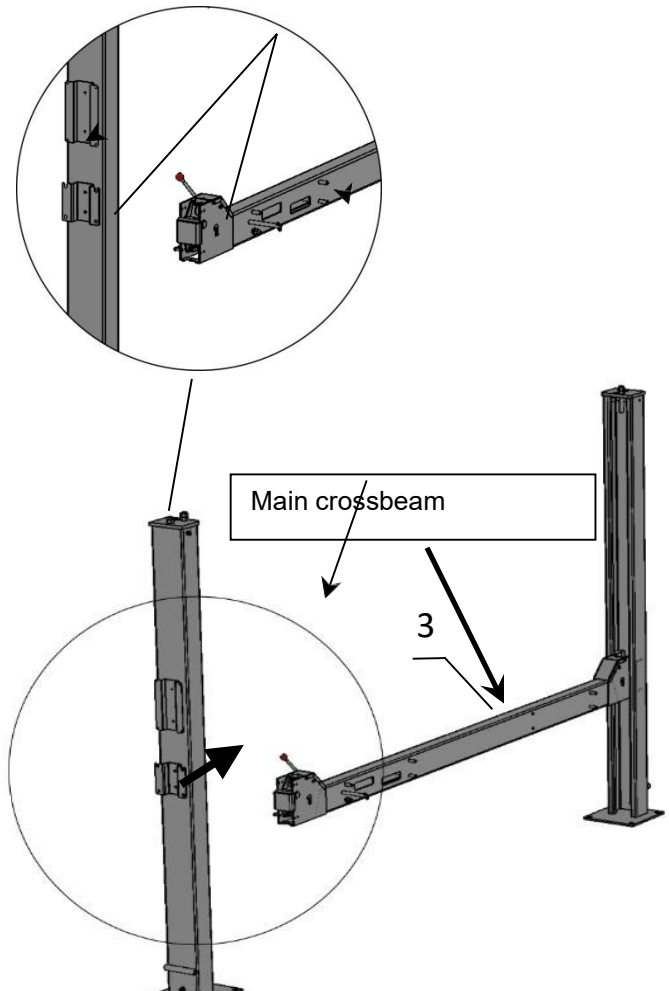
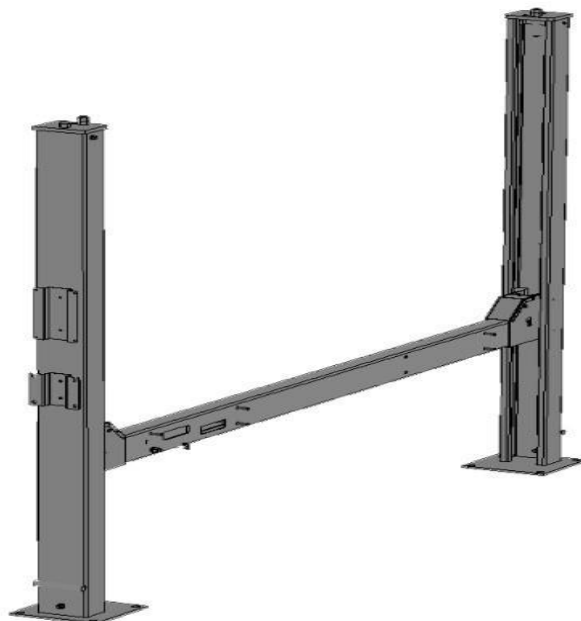
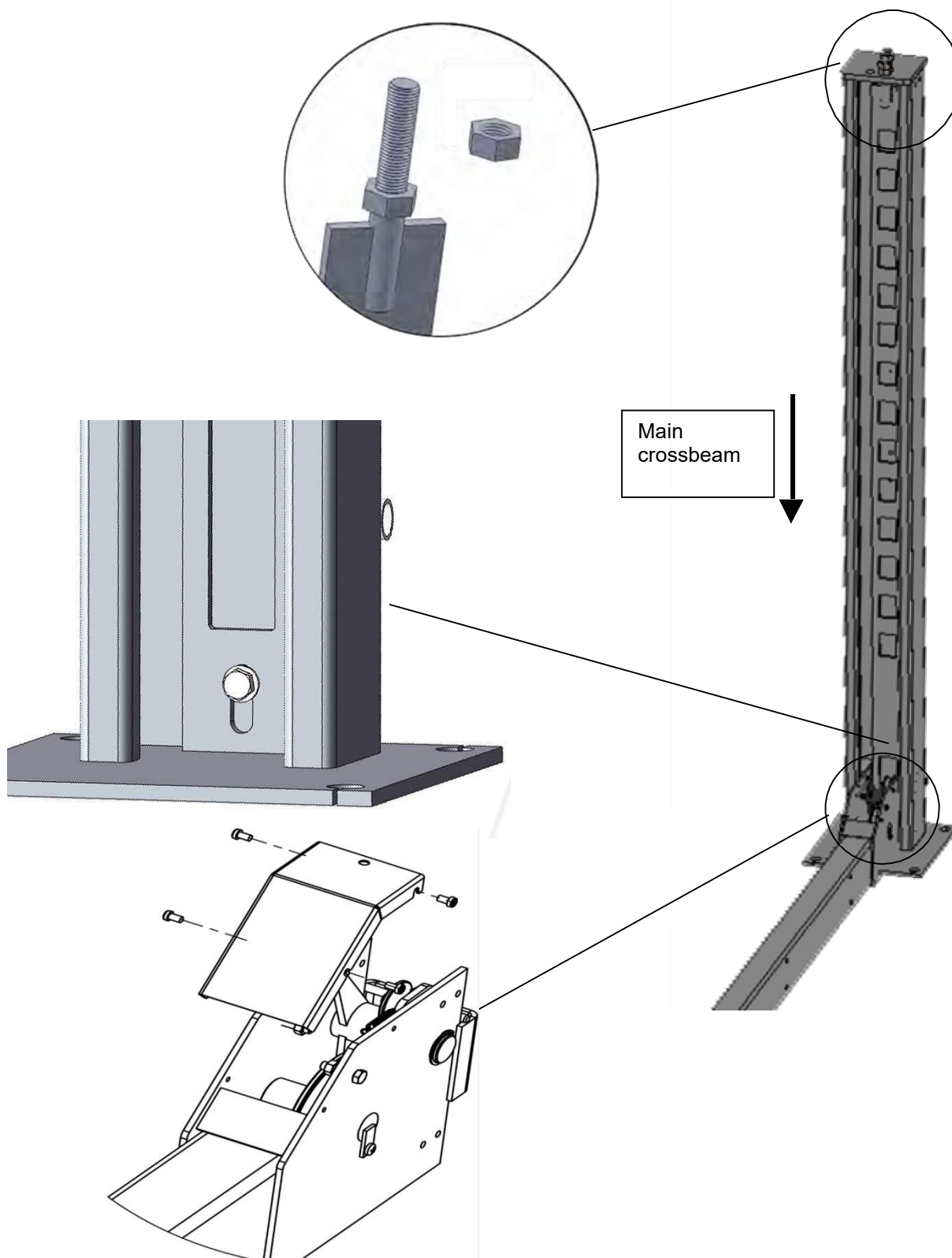


Fig.12

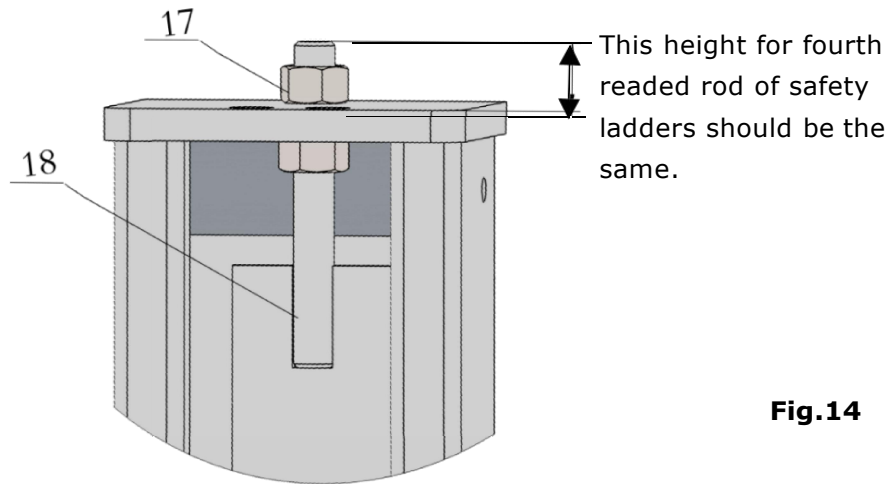


#### D. Install the Safety Ladders.

1. Adjust the four lower nuts so they are at the same position. Then insert the safety ladder (See Fig.13).



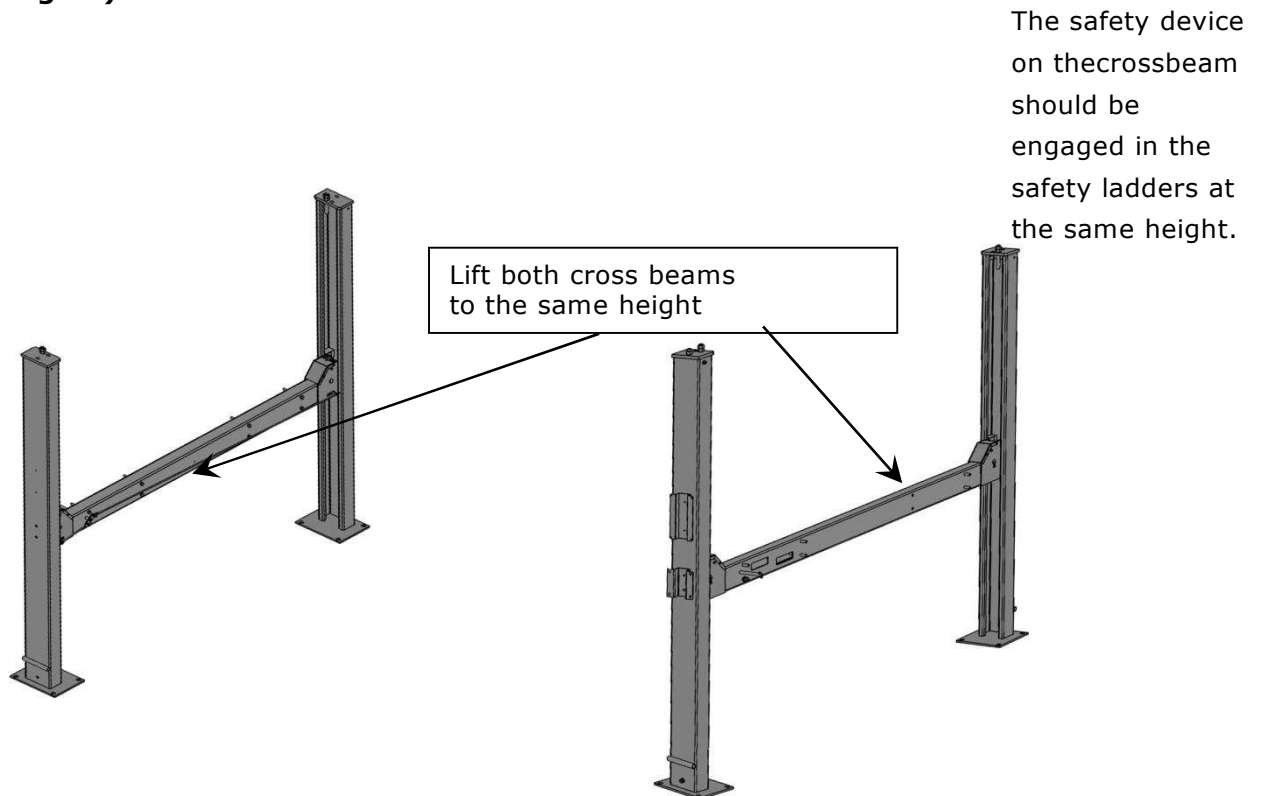
**2. Install Safety Ladders (See Fig.14)**



**Fig.14**

Safety ladder pass through the hole of the top plate, then tighten the two nuts

**E. Raise the cross beams at the same height and lock them on the safety ladders (See Fig.15).**

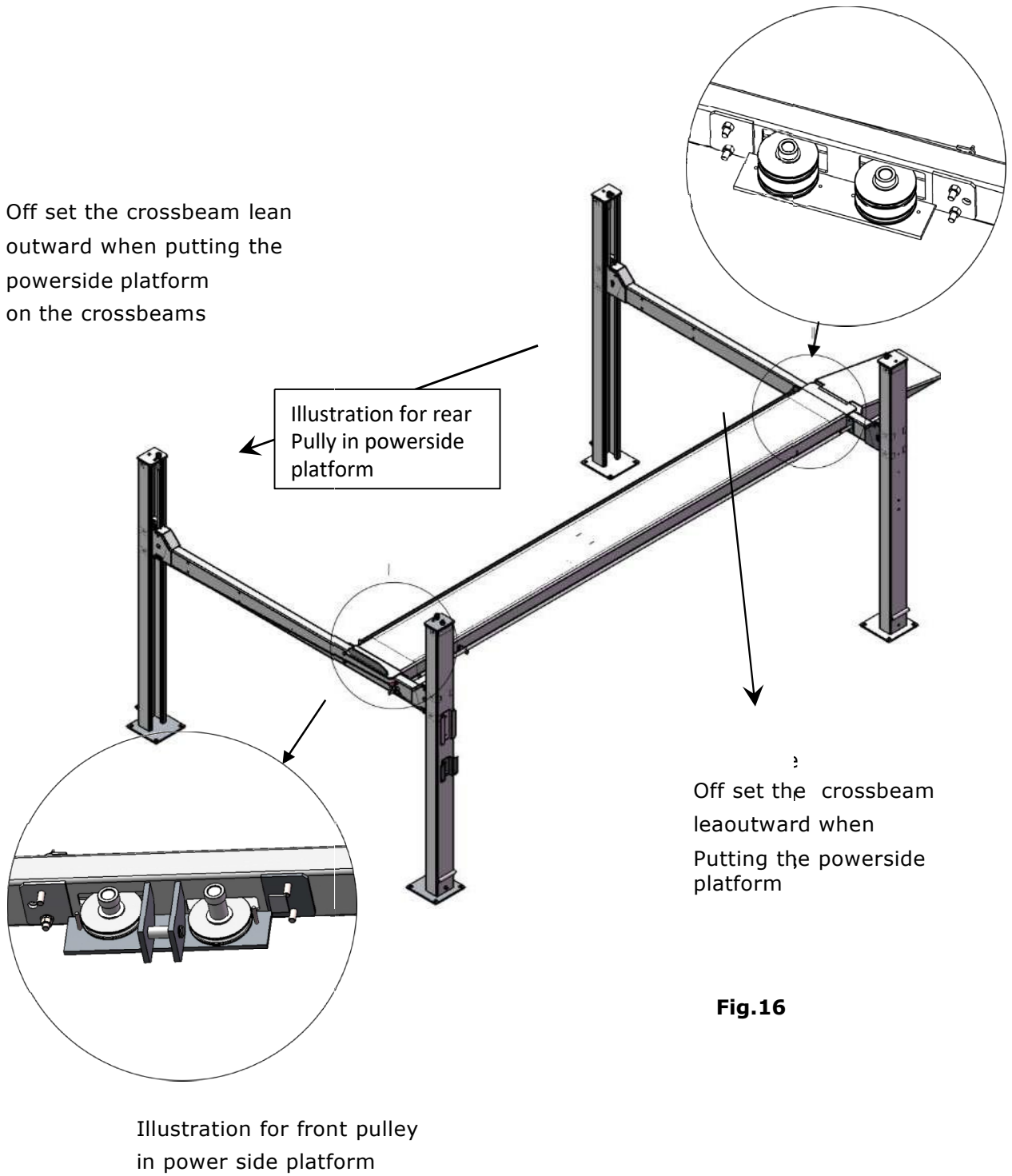


The lifting cross beam height should be fitted for installing the platform and its parts. 1m height is recommended.

**Fig.15**

**F. Install power side platform.**

1. Raise the power side platform above the crossbeam by a forklift or crane. Then move the crossbeam outwards until the pulleys of both platforms can be rested into the crossbeams's lots ( see **Fig.16** ). Tighten the Powerside Platform to the Cross beams by using bolts.



**2. Install the tire stop plate and connecting bolts:** Tighten the platform and the crossbeam **1** with bolts. Tighten the tire stop plate , platform and cross beam **2** with bolt.

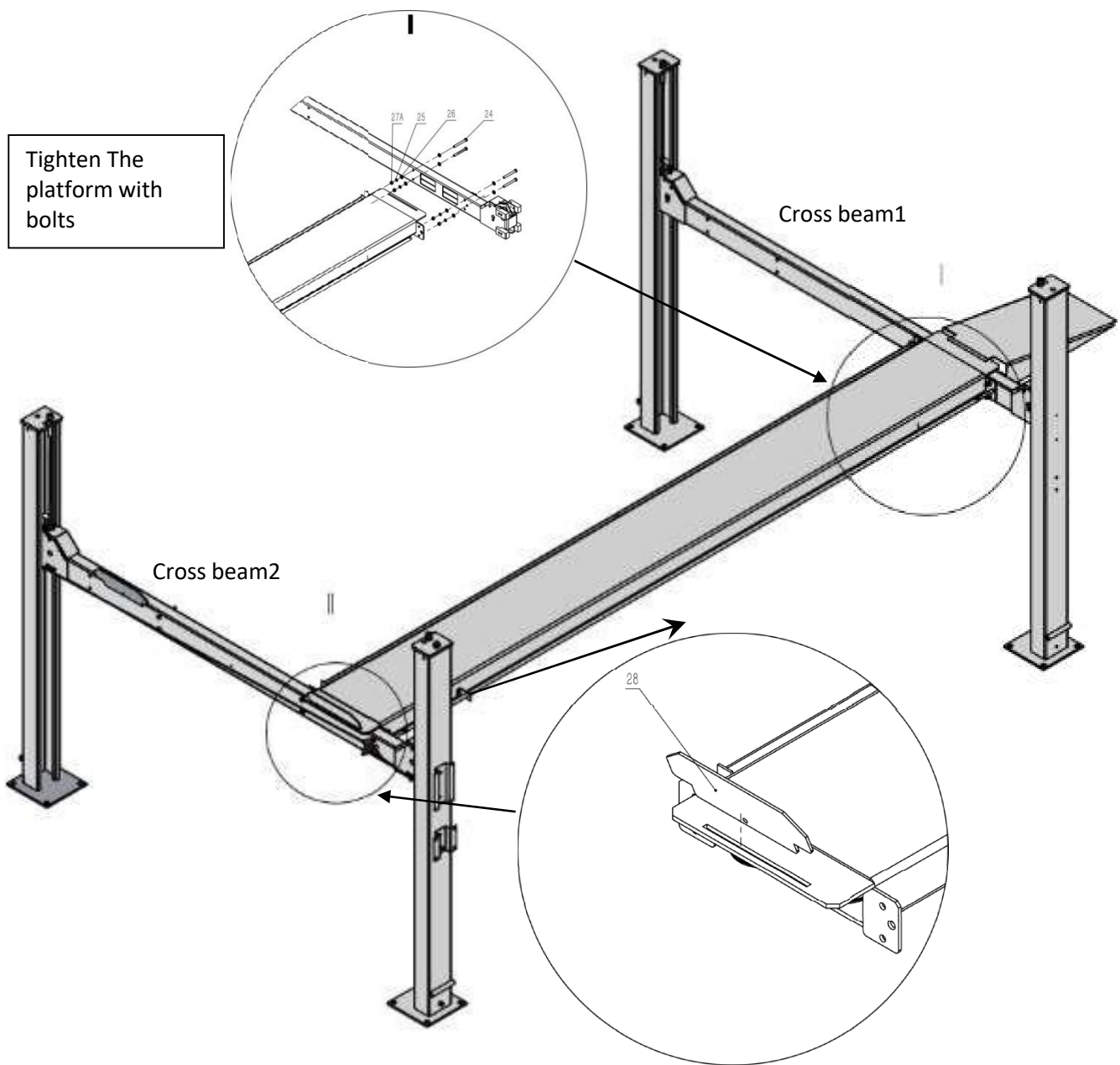
Note: Install the tire stop plate on the drive- in position . And the bolts for connecting with tire stop plate is longer, pay attention when choosing the bolts. (See Fig.17)

Instruction :

1) This lift is designed to be driven in at any position according to the space.

Below is the instruction for the drive -in position on cross beam 1. If it is chosen to be driven in from cross beam 2, install the tire stop plate to the other side only.

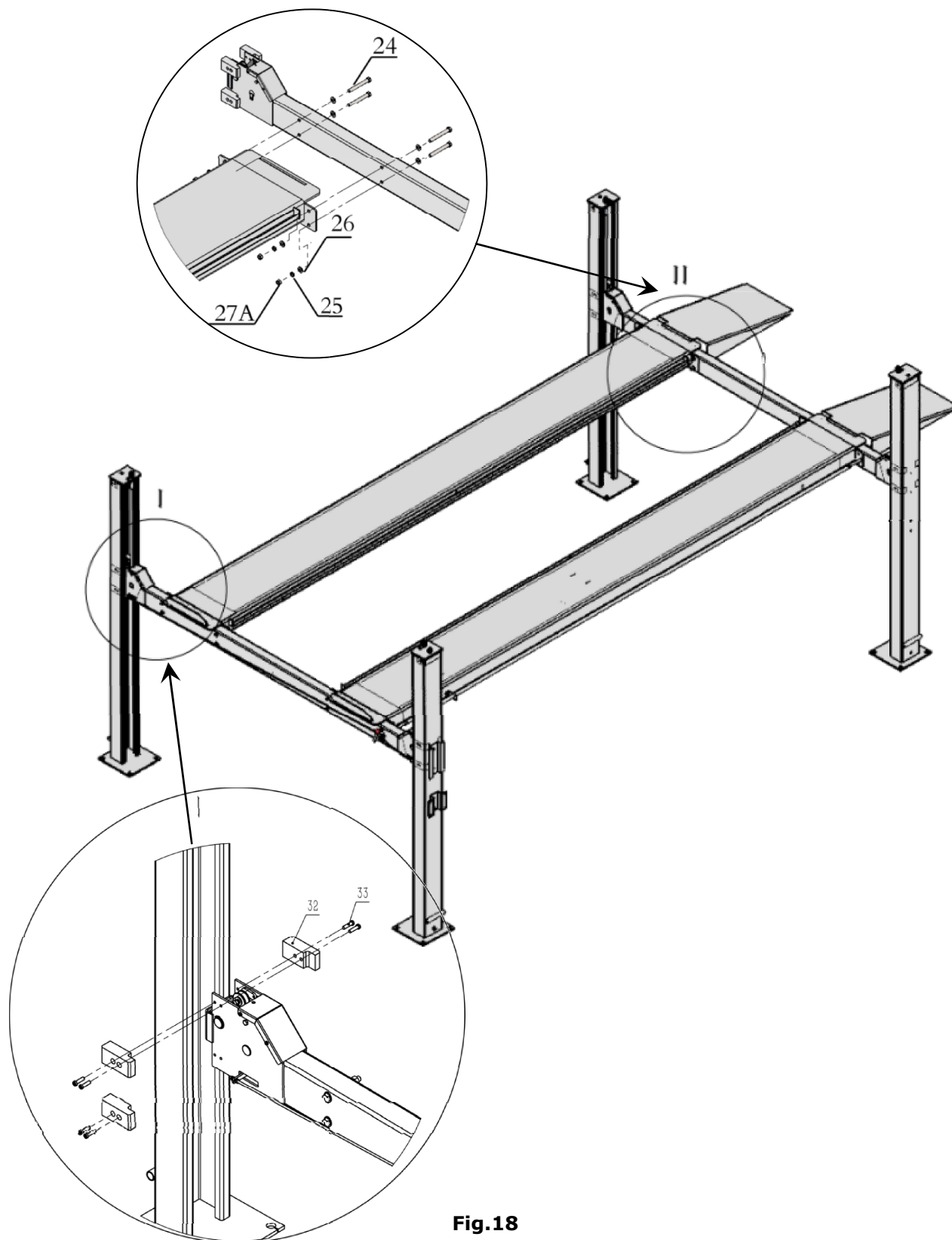
2) Power side column can be installed at any position accordingly. But the power unit must always be installed adjacent to the safety lock release handle. Pay attention to direction when installed the safety lock release handle, power unit and hydraulic system.



**Fig.17**



**G. Install the offside platform and limit slide block, and platform strengthen bolts. Check the verticality of columns with level bar and adjust with shims. (See Fig.18)**



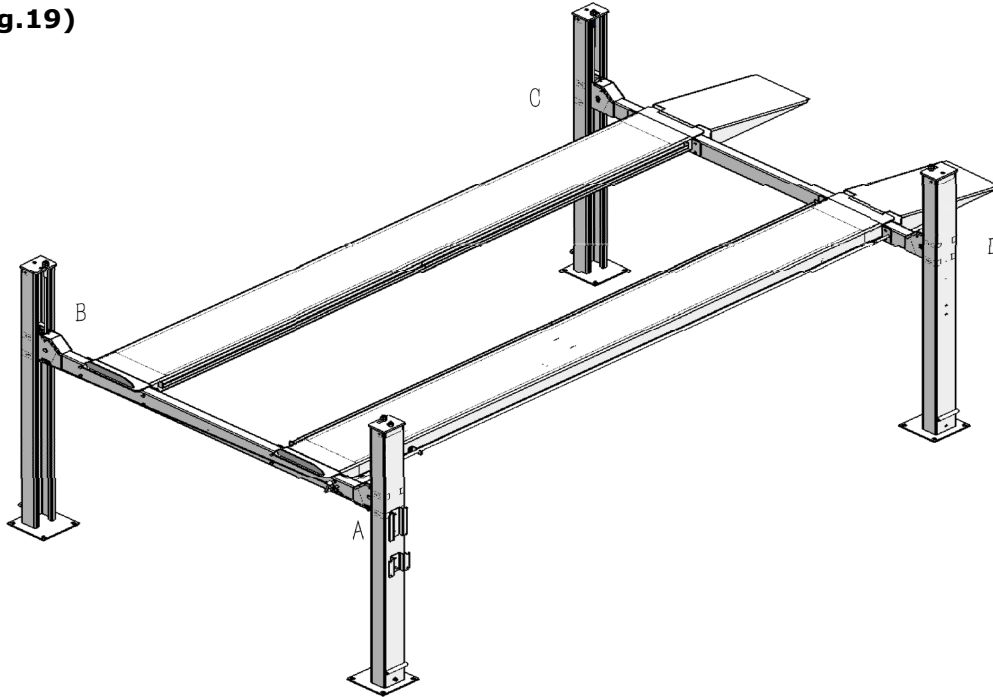
**Fig.18**



## H. Illustration for Wire Rope installation

1. Route the Wire Rope from the powerside platform via the pulleys according to the number below and then connect them to the columns.

(See Fig.19)



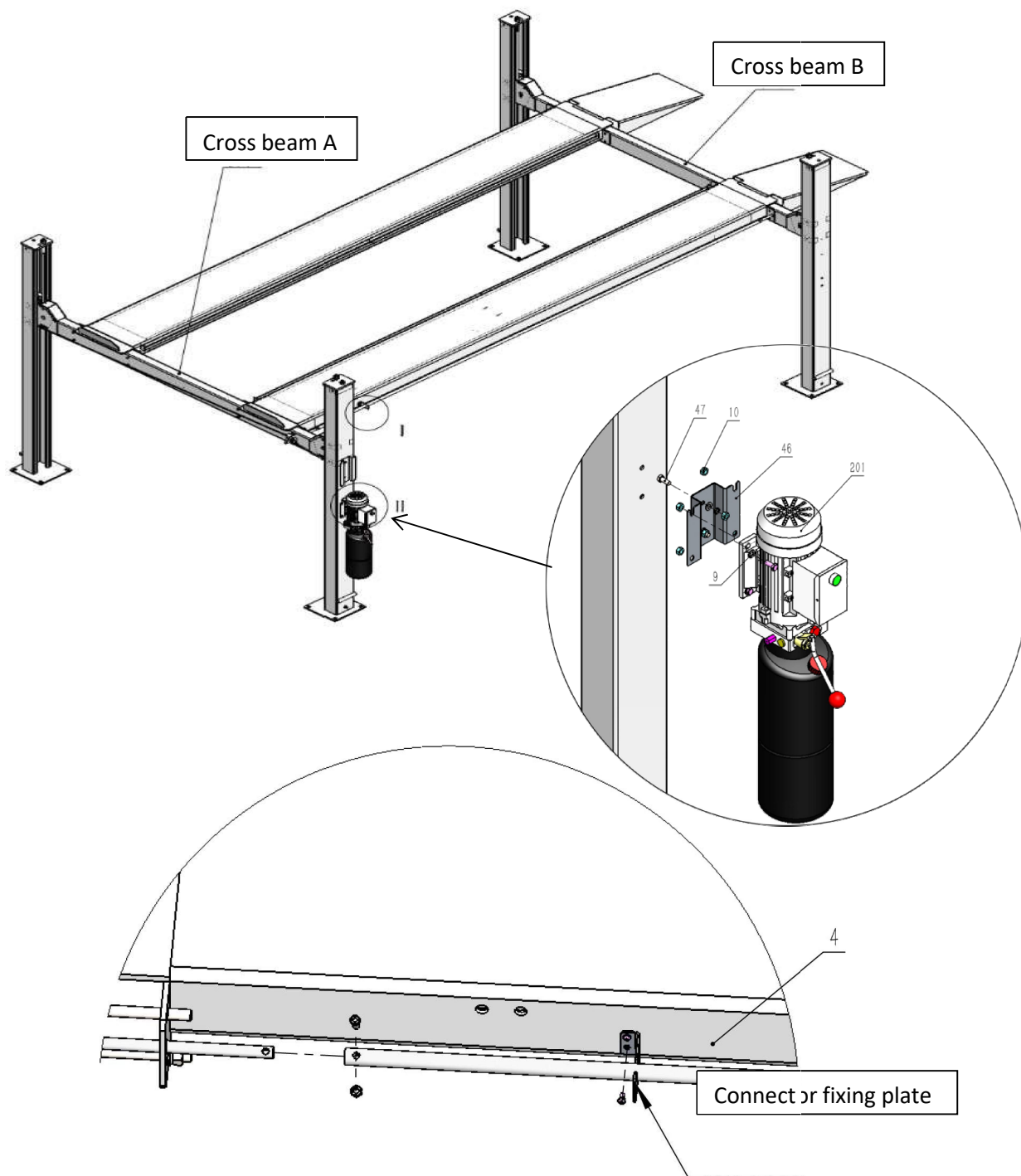
2. The cable goes through the crossbeam to column top plate and tightened with cable nuts

3. Illustration for cables under platform .

**J. Install power unit and connecting tube (See Fig.23).Noted:**

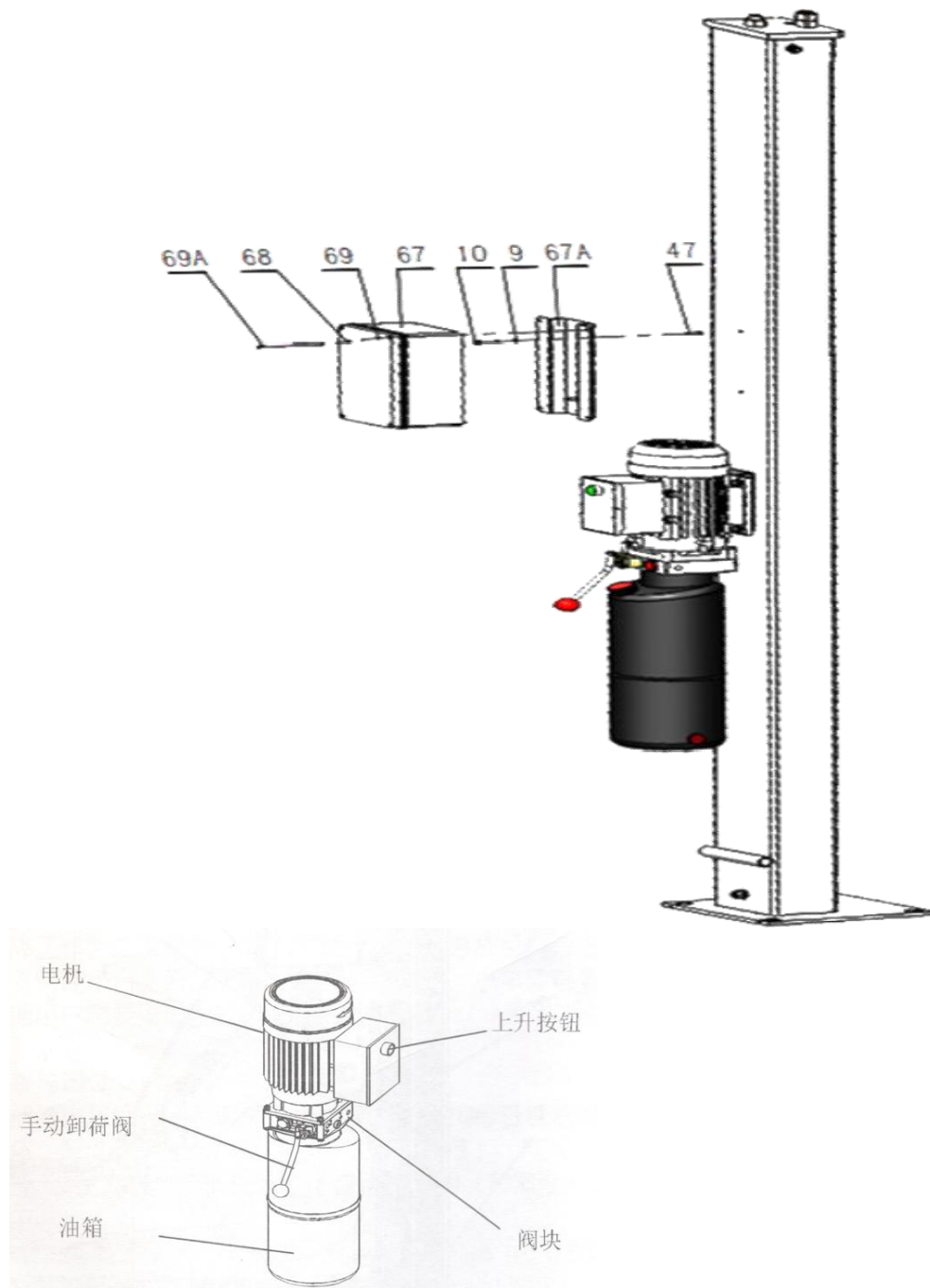
Power unit must be installed near the safety release handle. **1.**Install

Power unit on the cross beam **A**



M8x35, hexagon socket head bolts are used to secure the connecting pipe and connecting rod of the safety device

**K. Install the control box( See.Fig.25)  
(Electric control box is optional)**



**Fig.25**

Note:When the crossbeam goes to highest place,the crossbeam slide block touched the high limit switch drive bar and the lift stop rising.

M、Circuit diagram (See Fig.26)

hydraulic system connector list		
Item	Description	Qty
1	Pump station (manual unloading)	1
2	Master cylinder	1
6	splice	1
7	splice	1
8	Combined washer 14	1
9	Pump station hose assembly	1
10	Cylinder hose assembly	1

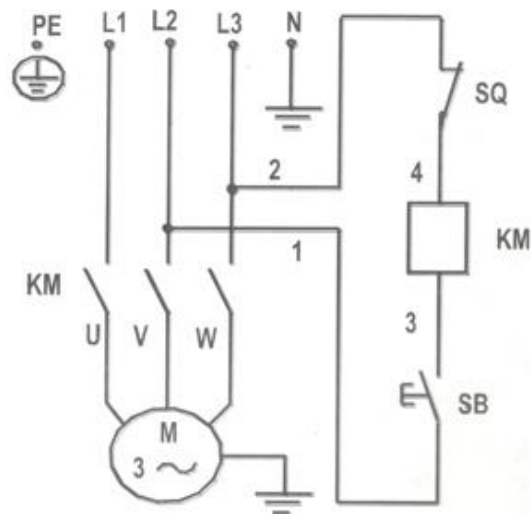
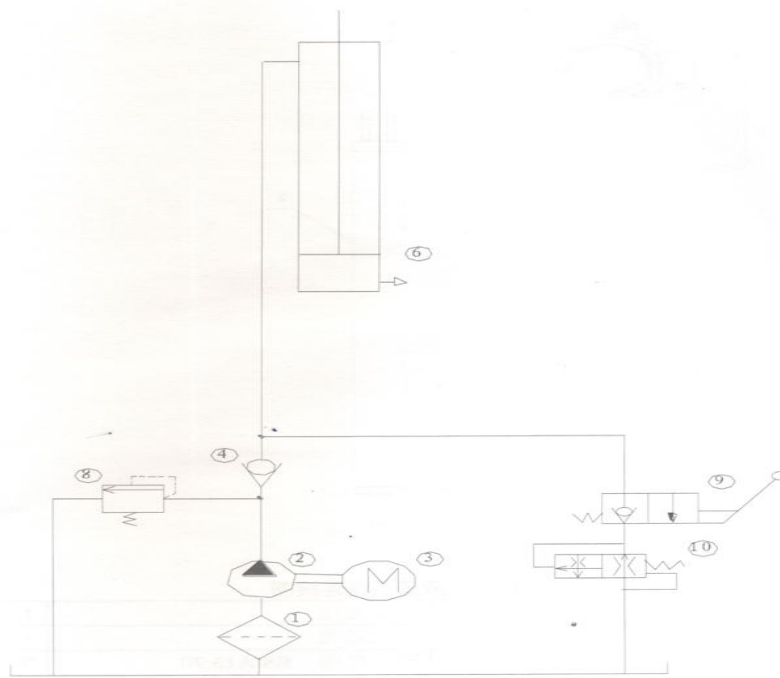
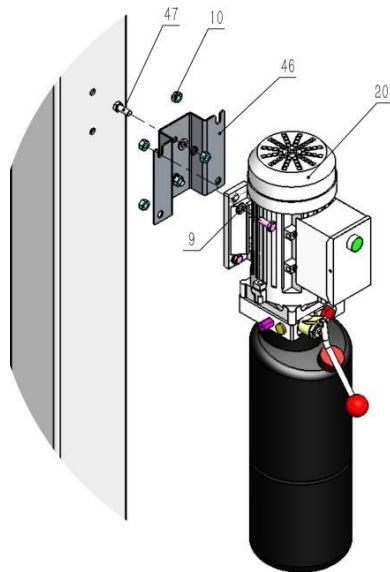


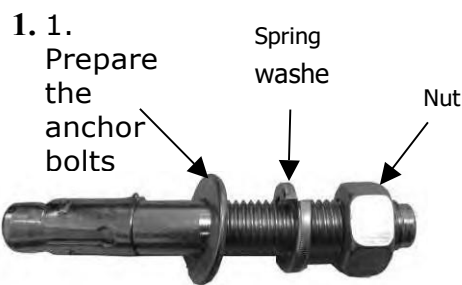
Fig.26

**1. Install motor fixing bracket (See Fig. 31)**



**Fig.31**

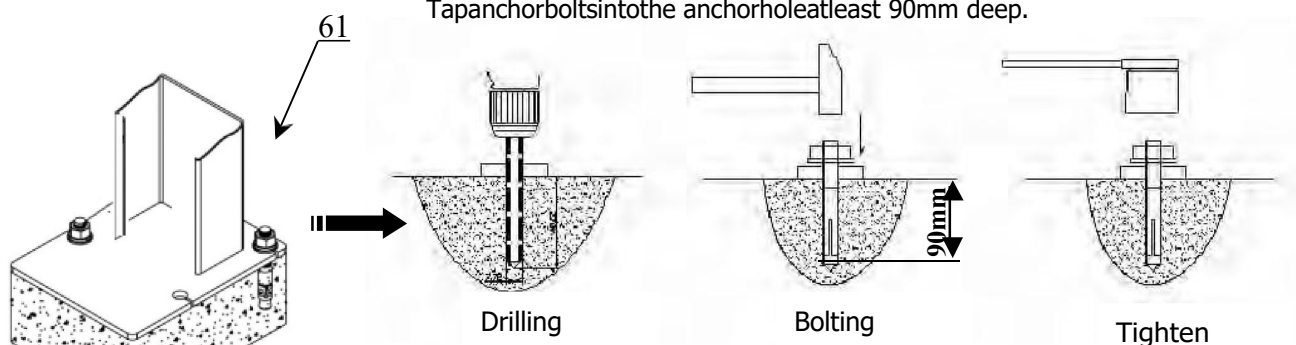
**0. Fix the anchorbolts**



**Fig.32**

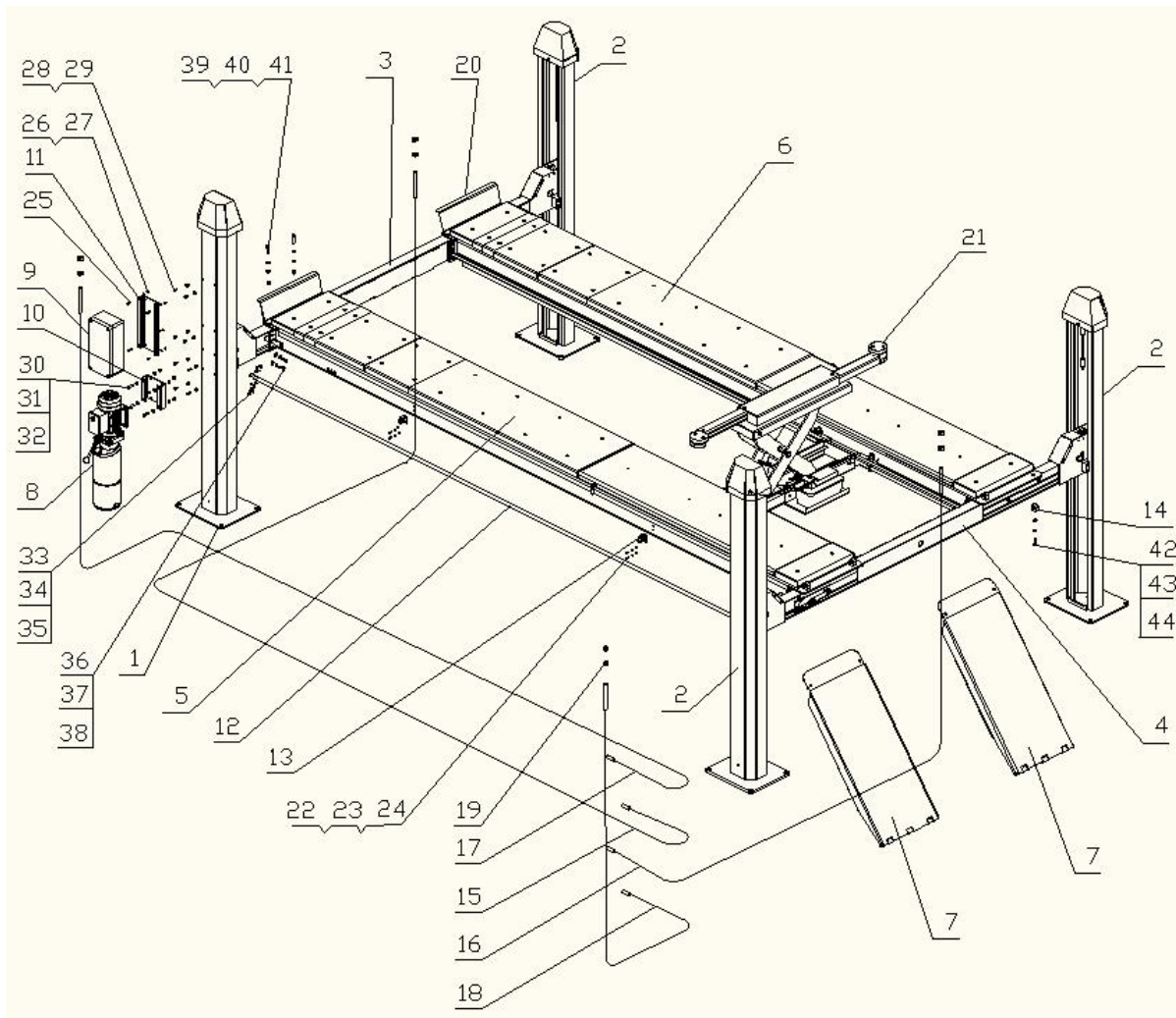
1.2 Adjust the column with the leveling bar and leveling pad, drill the anchor hole and install the anchor bolts. Tap the anchor bolts into the anchor hole with a hammer and tighten the bolts. (See Fig.33)

Note: The tightening torque for the anchor bolt is 150N.m. Tap anchor bolts into the anchor hole at least 90mm deep.



**19**  
**Fig.33**

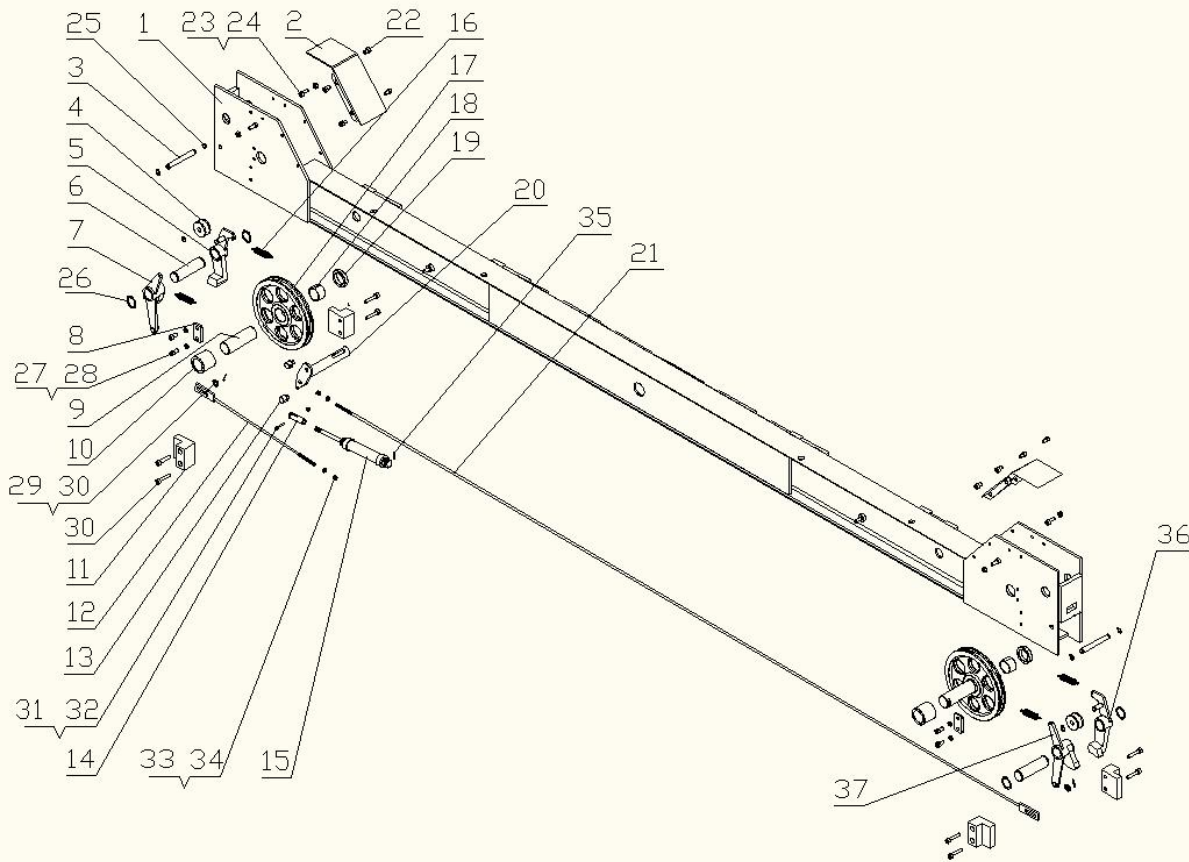
## IV. EXPLOSION DRAWING



**KT-4H150 4-POST PARKING LIFT Explosion Drawing&Detailed List**

Item	Description	Qty
1	Powerside Post	1
2	Offside Post	3
3	Crossbeam (Right)	1
4	Crossbeam (Left)	1
5	Powerside Platform	1
6	Offside Platform	1
7	approach bridge assembly	2
8	Pump Station (Manual unloading)	1
9	electric control box assembly	1
10	pump station mounting board	1
11	electric control box mounting board	1
12	Unlocking linkage	1
13	Unlocking connecting rod bracket	2
14	bridge guide plate connecting support lugs	4
15	Wire Rope Assembly A	1
16	Wire Rope Assembly B	1
17	Wire Rope Assembly C	1
18	Wire Rope Assembly D	1

19	Wire Rope lock nut M20 (Class 8.8)	8
20	baffle plate	2
21	Double lift car (optional)	1
22	hexagonal cylindrical head screw M6×16	4
23	Spring washer 6	4
24	Flat washer 6	4
25	hexagonal cylindrical head screw M6x20	4
26	Flat washer 6	4
27	Type 1 hexagon nut M6	4
28	hex socket cylindrical head screw M8×16	8
29	Type 1 non-metal inlay hex lock nut M8	8
30	hex socket cylindrical head screw M10×30	4
31	Flat washer 10	4
32	Type 1 non-metal inlay hex lock nut M10	4
33	hex socket cylindrical head screw M8×40	4
34	Flat washer 8	8
35	Type 1 non-metal inlay hex lock nut M8	4
36	hexagon head bolt (full thread) M12×30	16
37	Spring washer 12	16
38	Flat washer 12	16
39	Hexagon head bolt M12×50	8
40	Flat washer 12	16
41	Type 1 non-metal inlay hex lock nut M12	8
42	hexagon head bolt (full thread) M12×40	4
43	Spring washer 12	4
44	Flat washer 12	4

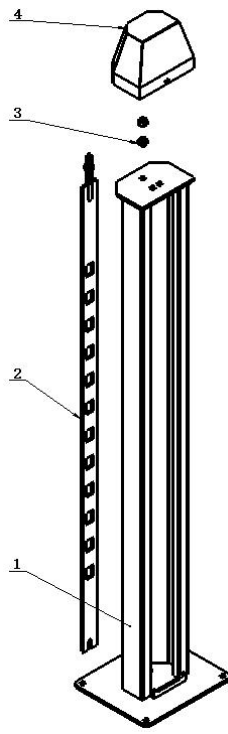


**Crossbeam Explosion Drawing&Detailed List**

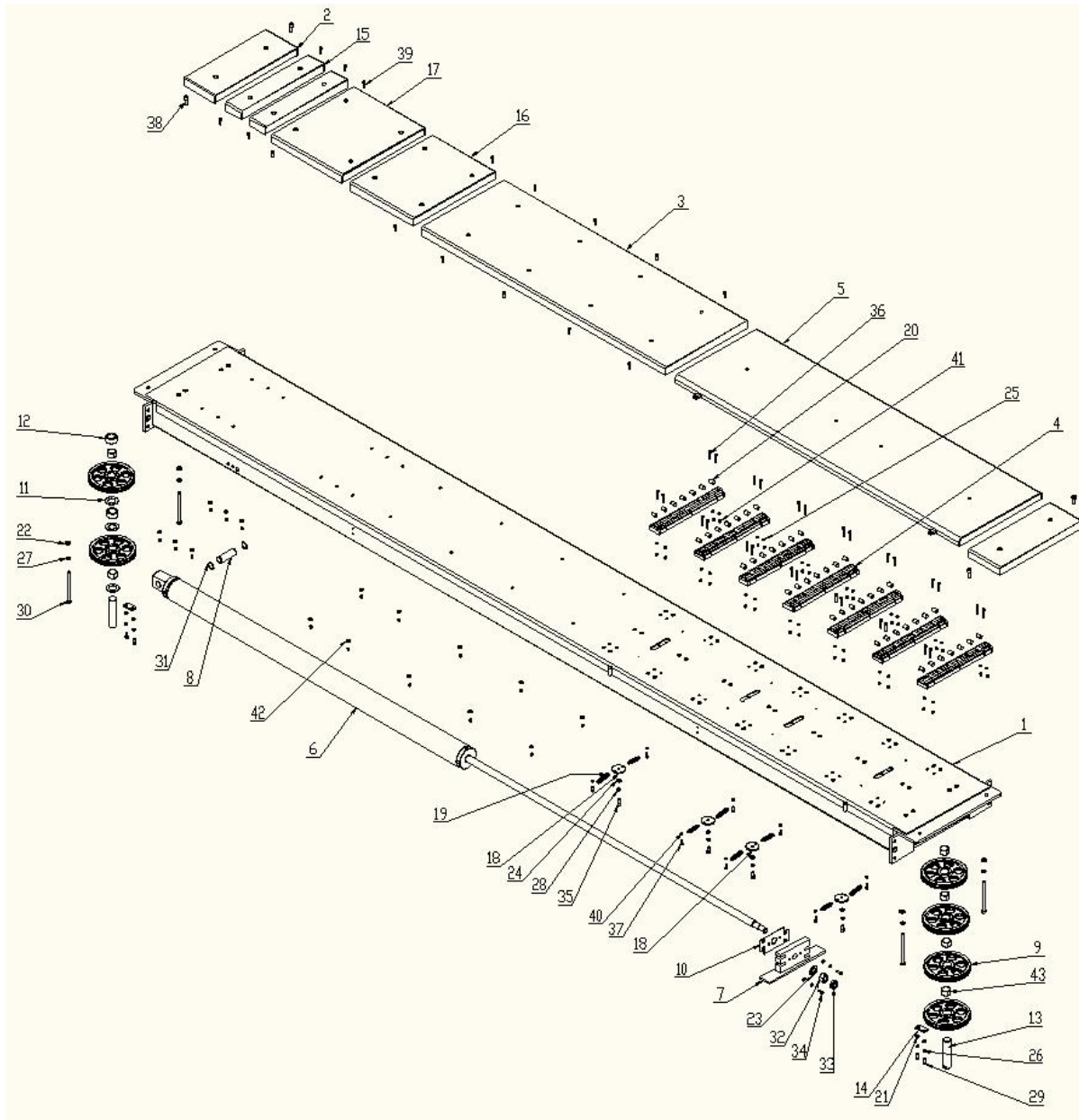
Item	Description	Qty
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1	Crossbeam assembly welding	1
2	Crossbeam guard	2
3	Safety lock shaft	2
4	anti-break lock rope wheel	2
5	Anti-break lock (R)	1
6	Crossbeam lock shaft	2
7	Safety Lock (R)	1
8	wire rope wheel axle clamp	2
9	Wire rope wheel shaft	2
10	Steel Rope wheel spacer (44)	2
11	Crossbeam slider	4
12	crossBeam Release Rod (390)	1
13	crossBeam lock shifting fork active shaft	2
14	cylinder pull head	1
15	small cylinder crossbeam	1
16	Safety lock spring	4
17	wire rope wheel	2
18	shaft sleeve 3525	2
19	Steel Rope wheel spacer (10)	2
20	crossbeam lock shifting fork plate assembly welding	1
21	crossBeam Release Rod (2635)	1
22	hex socket cylindrical head screw M8×12	8
23	hex socket cylindrical head screw M8×20	4
24	Type 1 hexagon nut M8	4
25	Elastic retaining ring for shaft type A 12	6
26	Elastic retaining ring for shaft type A 30	4
27	hex socket cylindrical head screw M8×16	4
28	Spring washer 8	4
29	Flat washer 10	2
30	Cotter pin 2.5×16	2
31	hex socket cylindrical head screw M5×25	1
32	Type 1 non-metal inlay hex lock nut M5	1
33	Type 1 non-metal inlay hex lock nut M6	2
34	Type 1 hexagon nut M6	2
35	Cotter pin 2.5×16	1
36	Anti-break lock(L)	1
37	Safety Lock (L)	1



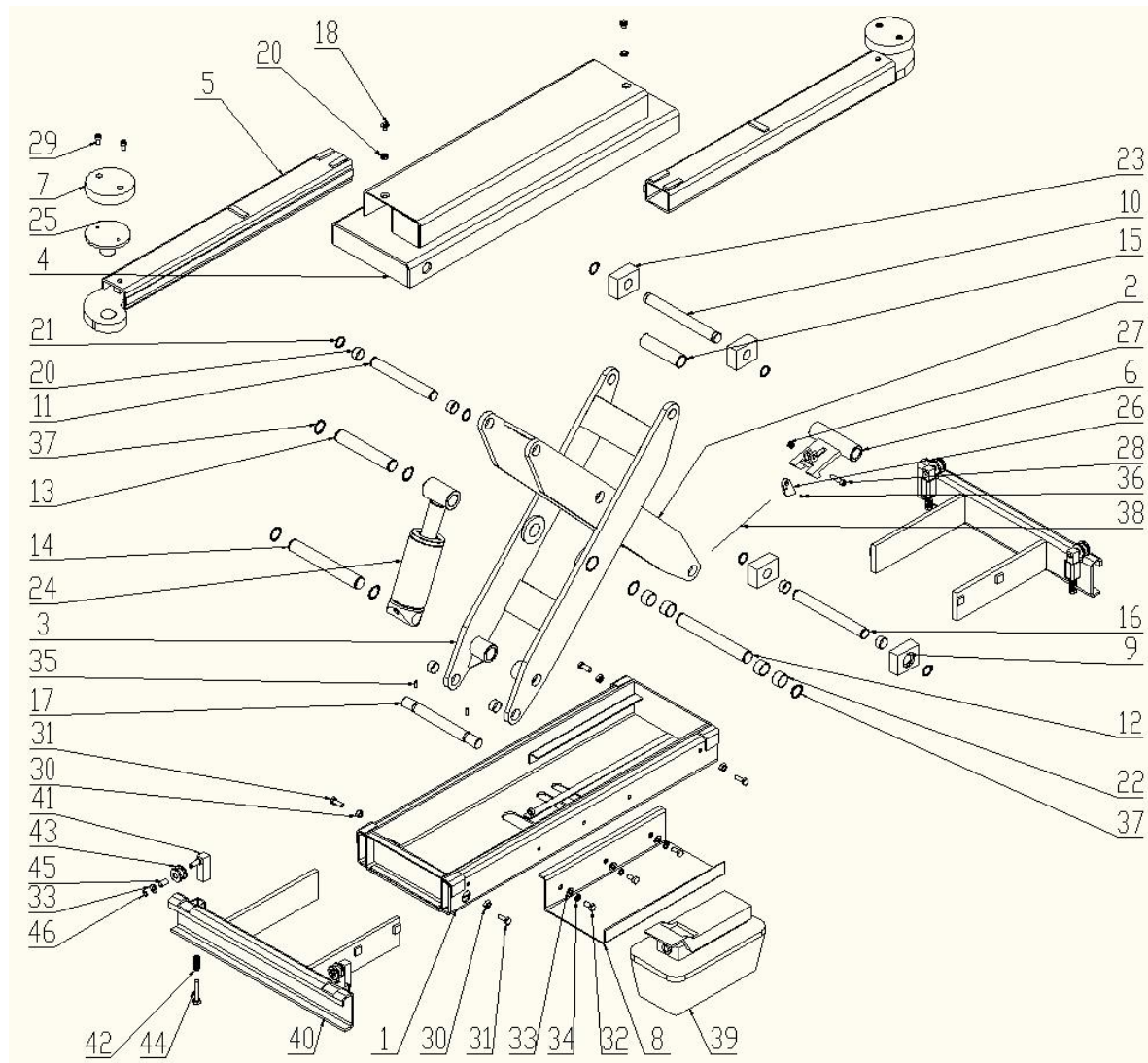


Post Explosion Drawing&Detailed List		
Item	Description	Qty
1	Powerside Post assembly welding	1
2	lock bar assembly welding	1
3	Lock Bar Lock Nut M20 (Class 8.8)	3
4	Post cap assembly welding	1



Powerside Platform Explosion Drawing&Detailed List		
Item	Description	Qty
1	Powerside platform assembly welding	1
2	mesa buckle box assembly welding	2
3	mesa center buckle box assembly welding	1
4	cover side slide roller rack assembly	7
5	side slide assembly welding	1
6	cylinder assembly	1
7	cylinder head rope frame assembly welding	1
8	cylinder shaft	1
9	crossbeam wheel	6
10	cylinder head rope frame pressure plate	1
11	countertop rope wheel gasket	3
12	countertop rope wheel spacer	2
13	countertop axle	2
14	beam wheel axle clamp	2
15	Platform movable buckle box assembly welding A	2
16	Platform movable buckle box assembly welding B	1
17	Platform movable buckle box assembly welding C	1

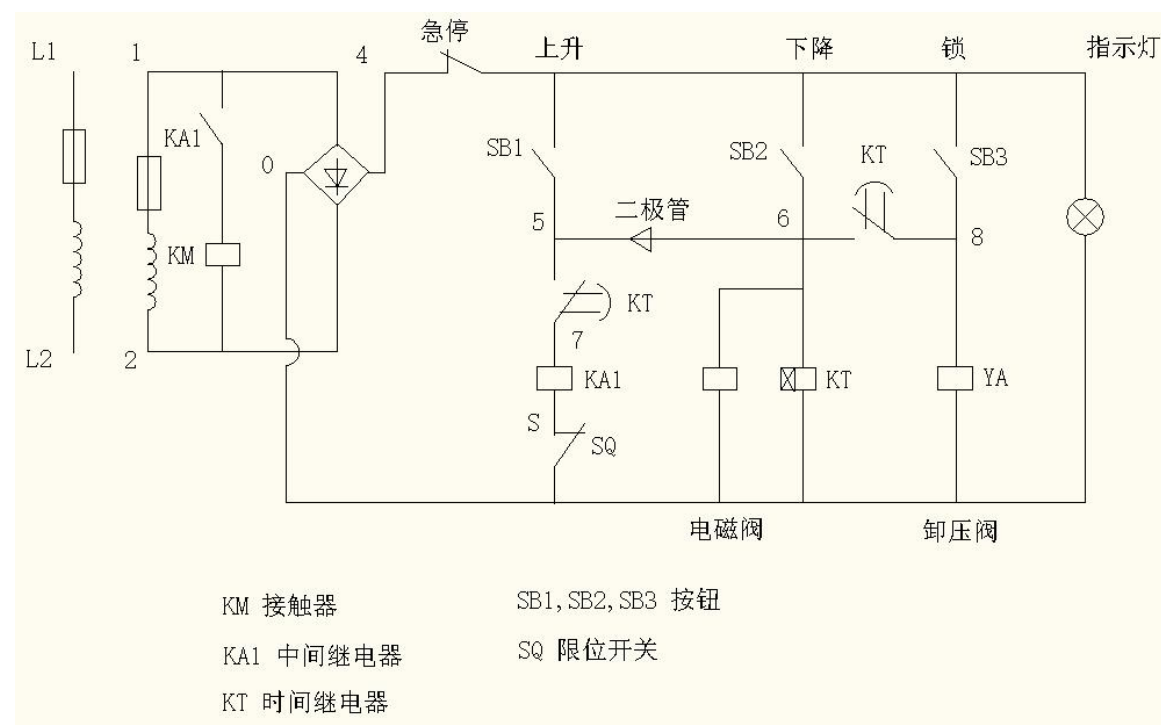
18	side slide fixing disc	4
19	side slide spring	8
20	cover side roller	49
21	Flat washer 8	6
22	Flat washer 12	4
23	Flat washer 24	1
24	Flat washer 10	4
25	Flat washer 6	28
26	Spring washer 8	6
27	Spring washer 12	4
28	Spring washer 10	4
29	hexagon head bolt (full thread) M8×20	4
30	Hexagon head bolt M12×160 (specially made)	4
31	Elastic retaining ring for shaft type A 30	2
32	Type 1 hexagon nut fine tooth M24×2	1
33	Hexagon thin nut with fine teeth M24×2	1
34	hex socket cylindrical head screw M8×20	2
35	hex socket cylindrical head screw M10×20	4
36	hexagonal cylindrical head screw M6×40	28
37	hexagonal cylindrical head screw M6×20	8
38	hexagon head bolt (full thread) M12×30	4
39	hexagonal cylindrical head screw M6×25	16
40	Type 1 hexagon nut M6	8
41	Type 1 non-metal inlay hex lock nut M6	44
42	Flat washer 6	16
43	shaft sleeve 3525	6



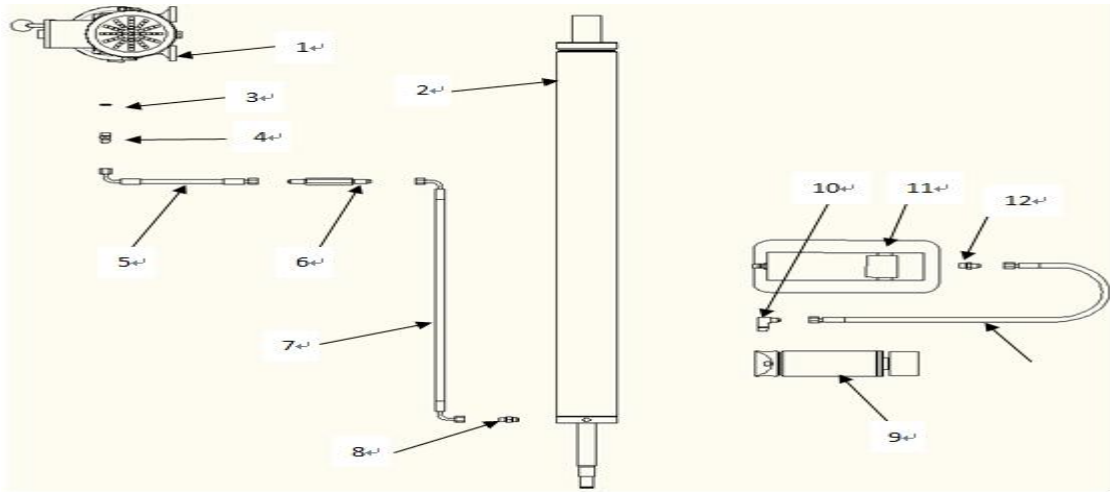
**Double lift car Explosion Drawing&Detailed List**

Item	Description	Qty
1	secondary shear base welding	1
2	secondary shear internal shear arm welding	1
3	second cut outer shear arm welding	1
4	secondary cutting table cover welding	1
5	secondary scissor puller arm welding	2
6	secondary shear lock tooth plate welding	1
7	second cut tray rubber mat	2
8	secondary shear pump station seat plate	1
9	secondary shear slide block	2
10	double cut outer cutting arm roller shaft	1
11	secondary shear inside the upper shaft of the shear arm	1
12	secondary shearing arm axis	1
13	secondary shear cylinder upper shaft	1
14	secondary shear cylinder lower shaft	1
15	Cut the slider spacer sleeve twice	1
16	double shear slide block shaft	1
17	second cut outer cutting arm lower shaft	1
18	Cross recessed countersunk head screw M10×12	2

20	Hexagon thin nut M10	2
20	shaft sleeve 2515	6
21	Elastic retaining ring for shaft type A 25	6
22	shaft sleeve 3020	4
23	Cut the slider twice	2
24	secondary shear cylinder	1
25	second cut tray welding	2
26	double cut release block	1
27	Type 1 non-metal insert hexagon lock nut M8	1
28	hex socket cylindrical head screw M8×35	1
29	hex socket cylindrical head screw M8×16	4
30	Type 1 hexagon nut M10	4
31	hexagon head bolt (full thread) M10×25	4
32	hexagon head bolt (full thread) M10×20	3
33	Flat washer 10	7
34	Spring washer 10	3
35	Hexagon flat end setting screw M6x16	2
36	Hexagon flat end setting screw M5×5	1
37	Elastic retaining ring for shaft type A 30	6
38	cut $\phi 2.5$ wire rope twice	1
39	double shear pneumatic hydraulic pump	1
40	secondary shear block welding	2
41	double shear floating shaft welding	4
42	double shear floating shaft seat spring	4
43	double shear floating shaft roller	4
44	Hexagon head bolt M10×55	4
45	shaft sleeve 1020	4
46	Elastic retaining ring for shaft type A 10	4







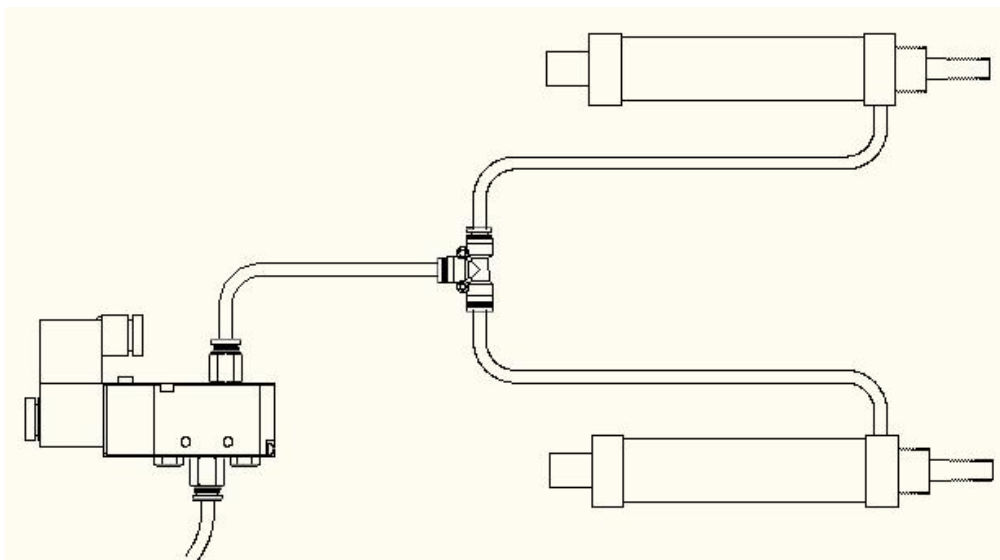
Hydraulic system connection diagram with

secondary lift car

Item	Description	Qty
1	Pump station (manual unloading)	1
2	Main cylinder	1
3	Combined washer 14	1
4	Hydraulic tubing joint	1
5	Pump station hydraulic tubing	1
6	Hydraulic tubing joint	1
7	Hydraulic cylinder tubing	1
8	Hydraulic tubing joint	1
9	Secondary lift cylinder	1
10	Secondary lift cylinder pipe connection	1
11	Pneumatic hydraulic pump	1
12	Pneumatic hydraulic pump connector	1

### Pneumatic diagram

Pneumatic connection diagram of the KT-4H150 4-POST PARKING LIFT, insert the gas pipe correctly, connect the air valve and the small cylinder, check whether there is air leakage after installation, and whether the small cylinder can be unlocked normally.

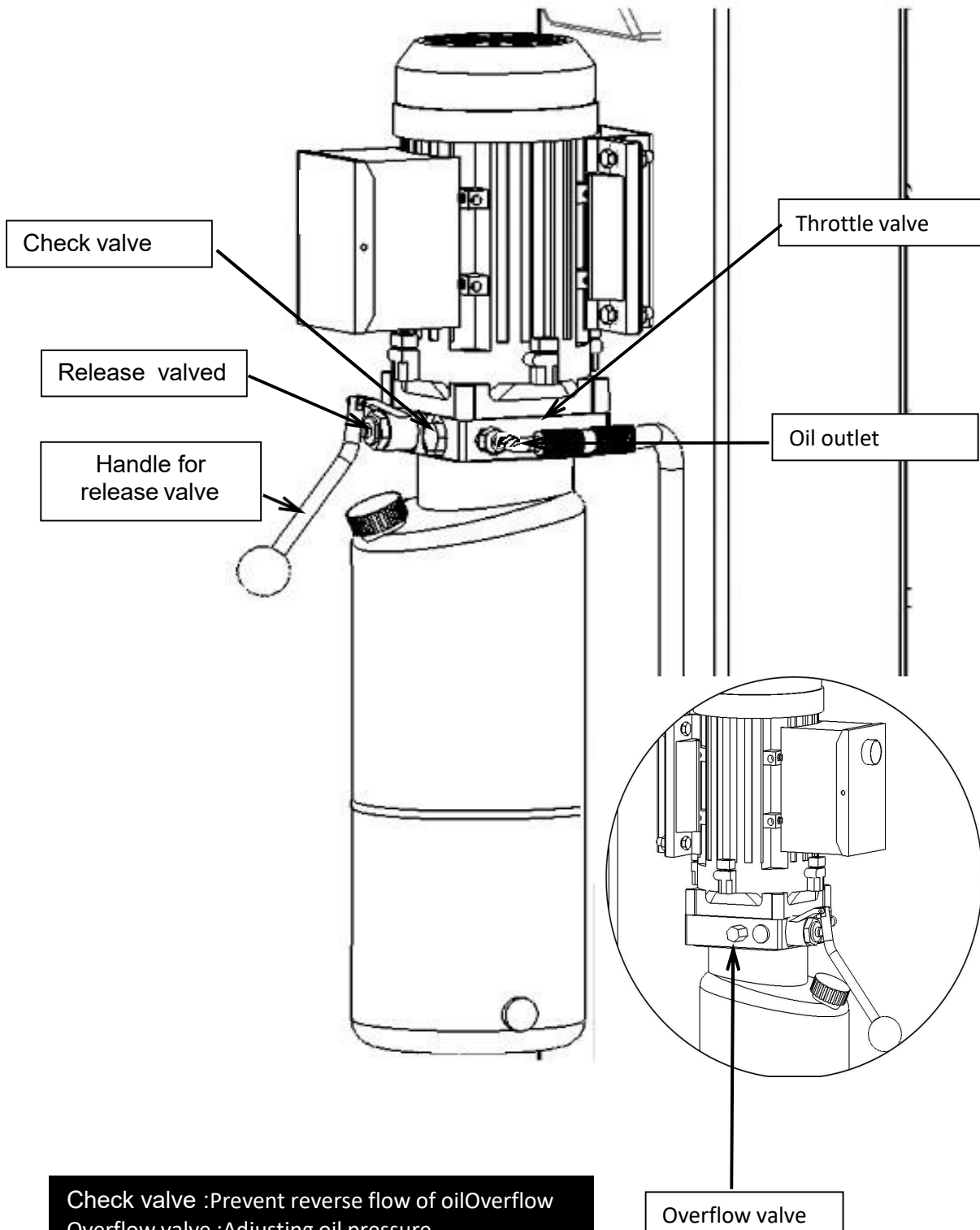


Air →

**Pneumatic connection diagram of the KT-4H150 4-POST PARKING LIFT**

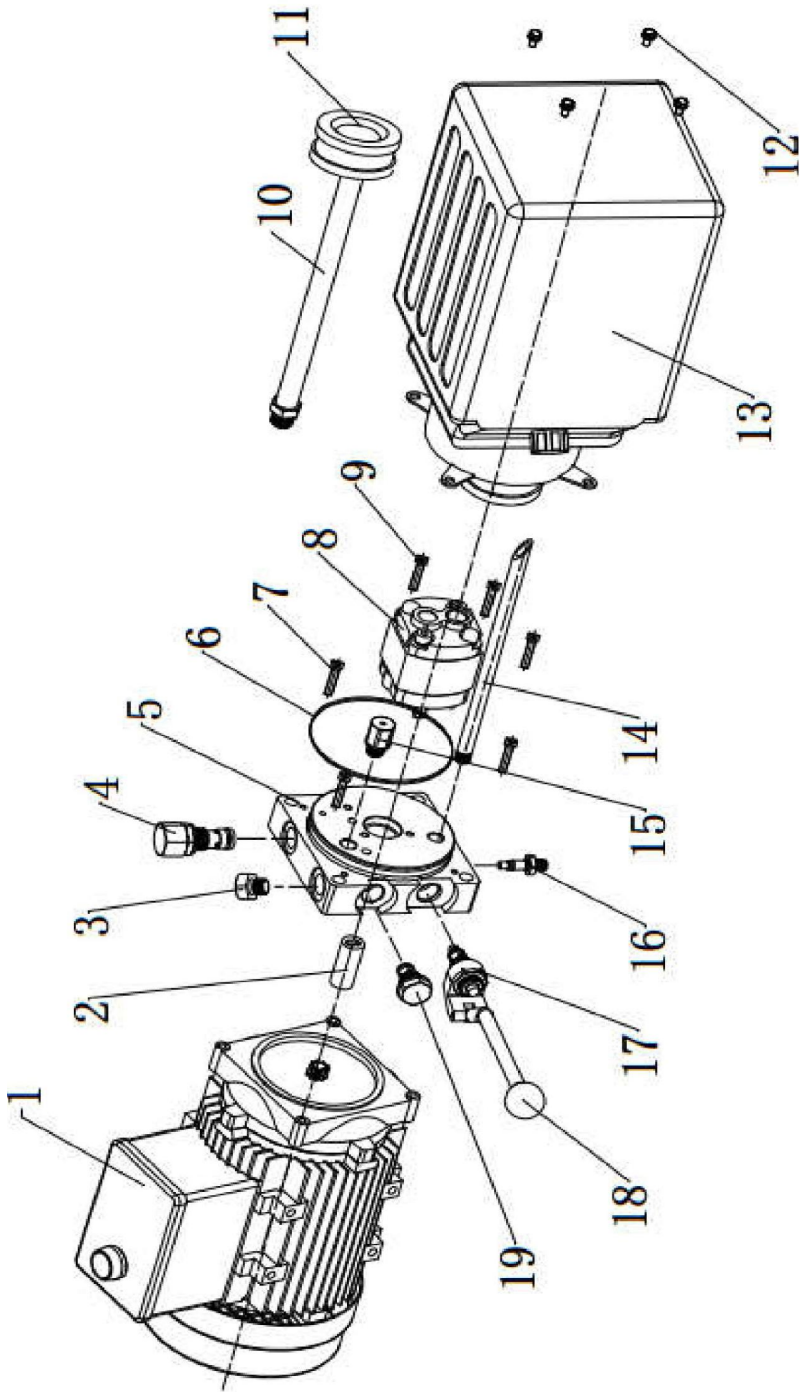


# Motor Function Analysis



Check valve :Prevent reverse flow of oil  
Overflow valve :Adjusting oil pressure  
Throttle valve :Adjusting the descent rate

## Motor drawing and part list



Nos.	Name	Quantity
1	Iron motor	1
2	Motor connecting shaft	1
3	Valve block blockage	1
4	Overflow valve	1
5	Valve Body	1
6	O-Ring	1
7	Valve Body Bolt	4
8	Gear Pump	1
9	Gear Pump Bolt	2
10	Oil Inlet Pipe	1

Nos.	Name	Quantity
11	Filter	1
12	Socket bolt	4
13	oil storage tank	1
14	Oil Return Pipe	1
15	Buffer Valve	1
16	Throttle valve	1
17	Release valve	1
18	Handle for release valve	1
19	Check valve	1
20		

## **V.Operation Instructions**

1 When used for the first time or after a long time (more than one month), L-HM32 anti-wear hydraulic oil should be added before normal operation, and the oil level should be maintained.

2 The operator should often check the visible parts and fixed parts of the wire rope, if there is one of the following situations, should be scrapped in time to replace the new wire rope

2.1 When the whole rope strand breaks.

2.2 In the 80mm length range, the external broken wire more than 9 ropes or 350mm length more than 20 ropes.

2.3 When the outside diameter is reduced by more than 15%.

2.4 When the broken wire gathers in the same strand or in a very short range.

3 The length of the wire rope should be adjusted regularly or irregularly according to its situation to ensure that the platform is in the lowest position, and the 4 wire ropes are pulled tight.

4 The four safety locks should always be synchronized into the square hole of the lock plate, and should be adjusted when there is no synchronization to ensure the safe operation of the machine.

5 The oil filter in the oil tank should be cleaned every 3 months, the hydraulic oil is replaced after 3 months of initial use, after that the hydraulic oil should be replaced every six months later, and the oil tank and the oil filter should be cleaned with gasoline when changing the oil.

6 If the local voltage fluctuation exceeds 10%, a voltage regulator should be installed.