

JINAN MORAL MACHINERY(MORAL INTERNATIONAL)CO.,LTD

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SJYZ

Greenhouse Picking Trolley

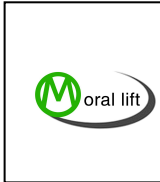
PROFESSIONAL LIFTING SOLUTION PROVIDER!



-----**WE PLAN , DESIGN, MANUFACTURE AND INSTALL...**



Better On Every Level



Introduction

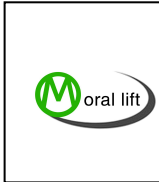
Greenhouse Picking Trolley



Greenhouse picking trolley is developed on the basis of absorbing the advantages of similar products domestic and overseas, this design is a mobile lifting equipment which has good lifting stability and wide applicability. Mainly suitable for indoor work, due to the small size of the whole machine, it has better flexibility and maneuverability, and has a wide range of use areas, great liquidity.

1) Greenhouse picking trolley is under special agencies on the ground combined





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with actual needs continuous optimization design, the fuselage use chassis of electric and hydraulic shear fork lift platform mechanism, combining the advantages of small volume, low noise, realize stepless speed, simple structure, easy operation, zero emission, the advantages of no pollution, is mainly used for greenhouse facilities in tomato, cucumber, the efficiency of fruit harvesting, crop pruning, artificial pollination and other agricultural operations, work efficiency can be increased more than 10 times.

2) The product relies on electric drive in the greenhouse track stepless speed regulation forward and backward operation, braking, the table can realize automatic control hydraulic lifting, in the greenhouse narrow channel operation, at the same time can realize the remote automatic remote control operation.

3) Track picking trolley is one of the necessary equipment in the cultivation and production of modern greenhouse vegetables long plum section, in order to facilitate the pruning fork after the plant is too high. Fruit collection and other links, the greenhouse picking trolley, can achieve accurate, fast lifting, meet any angle, height of fruit picking, pesticide pruning, pollination and other operations, and the operation is safe and reliable.

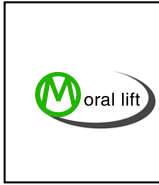
Structure:

Greenhouse picking trolley consists of six parts: working platform, scissor arm, lifting cylinder, chassis lifting mechanism, hydraulic control system, and bottom frame.

Technical Specification

Specification		SJYZ0.2-3	SJYZ0.2-4
Max platform height from ground	mm	3000	4000
Min platform height from ground	mm	590	632
Platform size	mm	1910*500	1910*500
Load capacity	kg	200	200
Min ground clearance	mm	75	75
Battery	v/Ah	2x12/80	2x12/80
Lifting motor	v/kw	12/0.8	12/0.8
Driving motor	v/kw	24/0.5	24/0.5
Driving speed	km/h	0-4	0-4
Charger	v/a	24/20A	24/20A
Overall length	mm	1936	1936





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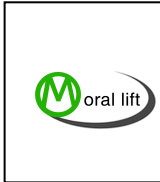
Overall width	mm	770	770
Overall height	mm	1642	1682
Machine weight	kg	490	550
Track type	Track-center distance		550
	Pipe diameter * thickness		48*4
Introductions	The electronic control is imported from the United States		
	Drive motor imported from Italy		
	Hydraulic unit seals imported from Japan		

Advantage of greenhouse picking trolley

- ❖ Ergonomic design, simple and convenient operation, equipped with foot switch, more convenient and flexible movement.
- ❖ Safe and reliable products, complete protective measures, the bottom is equipped with a strong safety guide rail, with brake system, can support to equip supporting columns.
- ❖ Flexible transfer, the bottom of the equipment is equipped with 4 flange wheels to ensure smooth movement along the track, equipped with 4 rubber tires, so that it can drive along the cement road, greenhouse picking trolley longitudinal forward and backward driving to achieve stepless speed regulation.
- ❖ The lifting platform is driven by hydraulic lifting system to achieve smooth and continuous vertical lifting. The system runs flexibly and can automatically and smoothly adjust the height. If the lifting is not used for a long time, the main switch can be closed.
- ❖ The equipment is equipped with two control boards, the control board on the operating table is equipped with emergency stop switch, direction switch and speed switch, also can control the operation platform lifting and moving. 24V output power supply can be connected to the control panel for connecting fans or lighting.

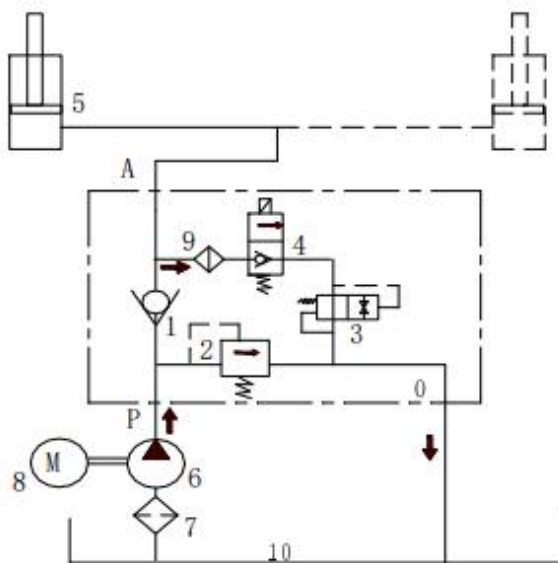
Working principle





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The oil pump is driven by the motor, and the high-pressure oil enters the P cavity of the valve block, and is output to the A cavity through the check valve 1, and enters the lifting cylinder to raise the working platform slowly. Depending on the load, the working pressure is set by the relief valve 2 to prevent overload or overpressure. When the working platform descends, turn on the solenoid valve 4. Under the gravity of the working platform load, the hydraulic oil of the lifting cylinder flows to the A cavity and enters the valve block. Because the check valve 1 is reversely closed, the hydraulic oil can only pass through the opened solenoid valve 4, through the adjustable flow valve 3, it is discharged into the oil tank from the O cavity, and the working platform is slowly lowered. Because the pressure balance structure is adopted inside the valve, its closing and starting operations are only controlled by the electromagnet, so the stability of the lifting speed will not be affected by the load fluctuation.



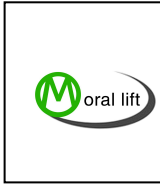
- 1. Non-return valve
- 2. Overflow valve
- 3. Throttle valve
- 4. Solenoid valve
- 5. Cylinder
- 6. Oil pump
- 7. Oil-filter screen
- 8. Motor
- 9. Oil-filter screen
- 10. Oil tank

Schematic diagram of working principle of hydraulic system

Operation Instructions

1. Operation (power) input: Turn on the main power switch and key switch on the base control box.

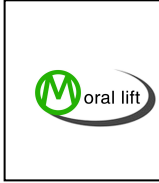




2. **Platform down/up:** Press the green button on the control box, the platform will go up; press the red button on the control box, the platform will go down. There are the same operation buttons on the base. When the equipment is not used for a long time, the emergency stop button switch on the control box must be turned off.
3. **Equipment walking:** turn on the toggle switch on the upper control box to the walking gear, choose the forward and backward state you want to walk (switch rotation), adjust the speed you want to walk (adjust the speed control switch), and step on the foot switch on the platform slightly.
4. **Chassis up/down:** Press the up/down button on both sides of the upper control box or the chassis up/down button on the chassis to realize the chassis up/down function. When the up button is pressed, the chassis rises, and then the machine can rotate 360 degrees. After adjusting the working state, press the down button to retract the limb legs and return to the walking state.
5. There is a charging stand on the chassis, and the external power supply is AC220V to charge the battery.
6. The lifting platform is strictly prohibited to be overloaded for lifting work.
7. When the lifting platform is raised, it is strictly forbidden for the operator to use other objects at high altitude to perform large force movements in the horizontal direction.

Maintenance

1. The hydraulic oil should be replaced 12 months after the product is put into use, and it will be replaced irregularly in the future depending on the frequency of use and the degree of contamination of the hydraulic oil. When the hydraulic oil is replaced, the inner wall of the oil tank is thoroughly cleaned, and foreign objects such as metal particles, cotton yarn, and fibers cannot be allowed to enter the oil tank.
2. The pollution of hydraulic oil must be strictly prevented. There should be no water, acid, alkali and other impurities in the oil, and anti-rust oil should not be applied in the oil tank.

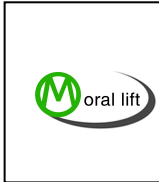


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- 3. If the solenoid valve is blocked by foreign objects, the hydraulic system will fail. Remove the solenoid coil, screw out the valve sleeve, pull it out together with the valve core, immerse it in kerosene and turn the valve core gently to clean out the stuck debris, and then gently pull out the valve core to check the foreign matter in the valve sleeve and In case of damage, carefully install the valve core after treatment, so that the valve core can slide smoothly in the valve sleeve. Pay attention to maintaining the original assembly accuracy, and then put them into the valve body together, and then install the corresponding solenoid valve.**
- 4. If the platform is found to fall automatically, check whether the oil pipe joint is leaking oil, and whether there is foreign matter stuck in the lift valve group.**
- 5. Regularly check whether the upper limit switch is out of order and whether the fixing bolts of the walking motor are loose.**
- 6. Non-professionals should not disassemble the parts of the hydraulic system at will. If you are unsure, please do not repair it yourself. The factory can be entrusted to repair.**
- 7. Regularly add lubricating oil to the hinge of the support arm.**

Safe Operating Procedures

- 1. After the lifting platform is raised, the personnel on the working platform are strictly prohibited from doing any action with large lateral thrust or pulling force.**
- 2. In principle, it is forbidden to adjust the speed of the platform's ascent and descent after installation and debugging.**
- 3. The weight of the carried goods is not allowed to exceed the rated carrying weight.**
- 4. It is strictly forbidden for personnel to enter under the platform during the lifting process.**
- 5. During maintenance, the bottom of the platform must be properly supported and protected before entering the platform for maintenance.**



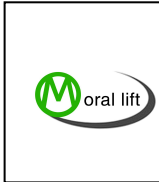
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6. It is strictly forbidden to risk overloading operations by means of increasing the pressure of the hydraulic system.

7. Do not dismantle or modify parts without authorization.

Trouble shooting

Trouble phenomenon	Trouble reason	Trouble shooting
Hydraulic motor not working	<ol style="list-style-type: none"> 1. The power supply is not connected well 2. The normally closed contact of the travel switch is disconnected 3. Poor contact at other electrical connections 	Checked them out one by one by electrician
Oil pump have turning difficulty	<ol style="list-style-type: none"> 1. Excessive load 2. The oil pump motor has different shafts 3. The oil pump is stuck 4. The valve is blocked 5. Serious pollution of hydraulic oil 	<ol style="list-style-type: none"> 1. Load according to rated load limit 2. Adjust the coaxiality 3. If the motor shaft cannot run by hand, it is confirmed that the oil pump is stuck and the oil pump needs to be replaced. 4. After confirmation, disassemble and wash or replace the valve



		5. Change hydraulic oil
The motor and oil pump are running normally, but the work platform does not lift or the load does not reach the rated weight	1. The set pressure of the hydraulic system is too low 2. The oil pump suction line leaks, allowing air to enter the hydraulic system 3. The oil level in the fuel tank is too low	1. Adjust the relief valve of the hydraulic control valve block 2. Tighten the joints or replace the sealing ring 3. Hydraulic oil must be added to the normal oil level
The work platform suddenly cannot be lowered	Solenoid valve block	Remove and wash the solenoid valve or replace the valve block

Warranty

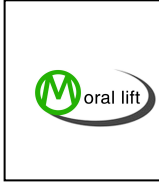
MORAL LIFT equipment has 5 years warranty on structure, and first year warranty on the whole machine. Within the warranty period, MORAL LIFT is responsible for the parts and structure, not including labor nor any other cost unless pre-agreed.

Power units, hydraulic cylinders, and all other assembly components such as slip plates, cables, chains, valves, switches etc, are warranted for one year against defects in material or workmanship under normal use. MORAL LIFT shall repair or replace at their option for the warranty period those parts returned to the factory freight prepaid which prove upon inspection to be defective. MORAL LIFT will not be responsible on any labor costs unless pre-agreed. MORAL LIFT will not responsible for the modification or upgrade of the product from the client unless pre-agreed.

These warranties do not extend to...

- defects caused by ordinary wear, abuse, misuse, shipping damage, un-proper installation, voltage or lack of required maintenance;**
- damages resulting from purchaser's neglect or failure to operate products in accordance with instructions provided in the owner's manual(s) and/or other**





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accompanying instructions supplied;

- normal wear items or service normally required to maintain the product in a safe operating condition;
- any component damaged in shipment;
- other items not listed but may be considered general wear parts;
- damage caused by rain, excessive humidity, corrosive environments or other contaminants.
- any change or modification made to the equipment without pre-agreed.

These warranties do not extend to any cosmetic defect not interfering with equipment functionality or any incidental, indirect, or consequential loss, damage, or expense that may result from any defect, failure, or malfunction of a MORAL LIFT product or the breach or delay in performance of the warranty.

MORAL LIFT makes no warranty on components and/or accessories furnished to MORAL LIFT by third parties. These are warranted only to the extent of the original manufacturer's warranty to MORAL LIFT. Other items not listed but may be considered general wear parts.

MORAL LIFT reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously.

Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims

