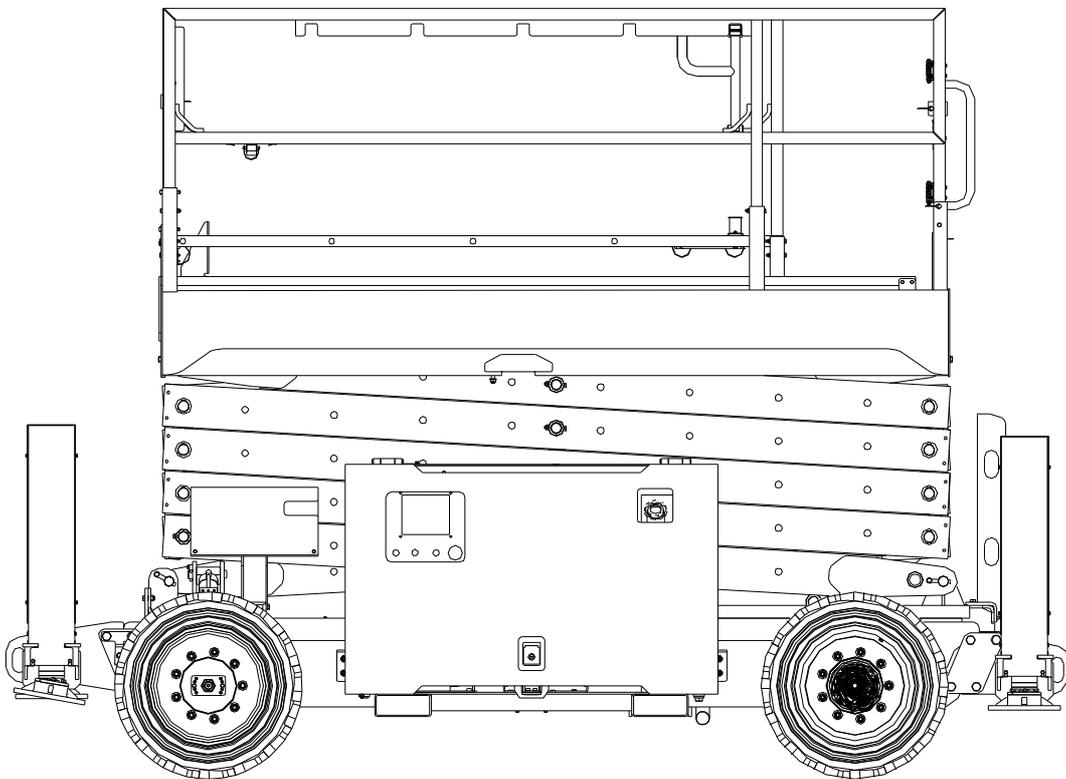




Hunan Sinoboom Heavy Industry Co., Ltd.

Technical Offer

GTJZ1218D



Company Profile

Founded on 28th Feb, 2008, Hunan SINOBOOM Heavy Industry Co., Ltd. is situated in Changsha, Hunan Province, China, known as the capital of engineering machinery in this country. This company is specialized in research, development, manufacturing, sale and service of aerial work equipment. There are four series of aerial work platforms, including self-propelled articulated boom lift /telescopic boom lift /scissor lift and spider lift, with working height from 6-44m. So far, the products have sold well all over China and the overseas market, e.g. Southeast Asia, Australia, Middle East, South America and Europe.

As a pioneer of aerial work platforms of China, the company owns the proprietary core technology and 30 items of intellectual property. Also sinoboom has come to be a member of IPAF (International Powered Access Federation) and China Engineering Machinery Association. In 2010, SINOBOOM was listed as one of key enterprises under four RMB100-billion industrial clusters (for equipment manufacturing) supported by the government. Meanwhile, SINOBOOM has passed the Australian ADR, European CE and Russian GOST.

Our products are widely used for ship building and repairing construction, civil engineering, electric power, communications, gardening, advertising, venues and stadiums, airport, harbor and various large factories and mines. It can satisfy the requirements of different customers in vary of industries.

Covering 200,000 m², Ninxiang County Jinzhou Industrial Park is an important carrier for sinoboom to develop further. The total investment in this program is approximately RMB 500,000,000. The area of Phase 1 is 66,667 m². The total building area is approximately 41,000 m², including 25,000 m² premises, e.g. Assembly Shop, Structure Shop, Coating Shop, Product Test Laboratory, Electric Laboratory, Hydraulic Laboratory, Office Building, Dormitory, etc. Phase 1 had been put into operation in April 2013. The production capacity will exceed RMB 500 million in value.

Vision decides height, height determines strength. With "Integrity brings business, Science makes progress", we are looking forward to cooperate with friends over the world.



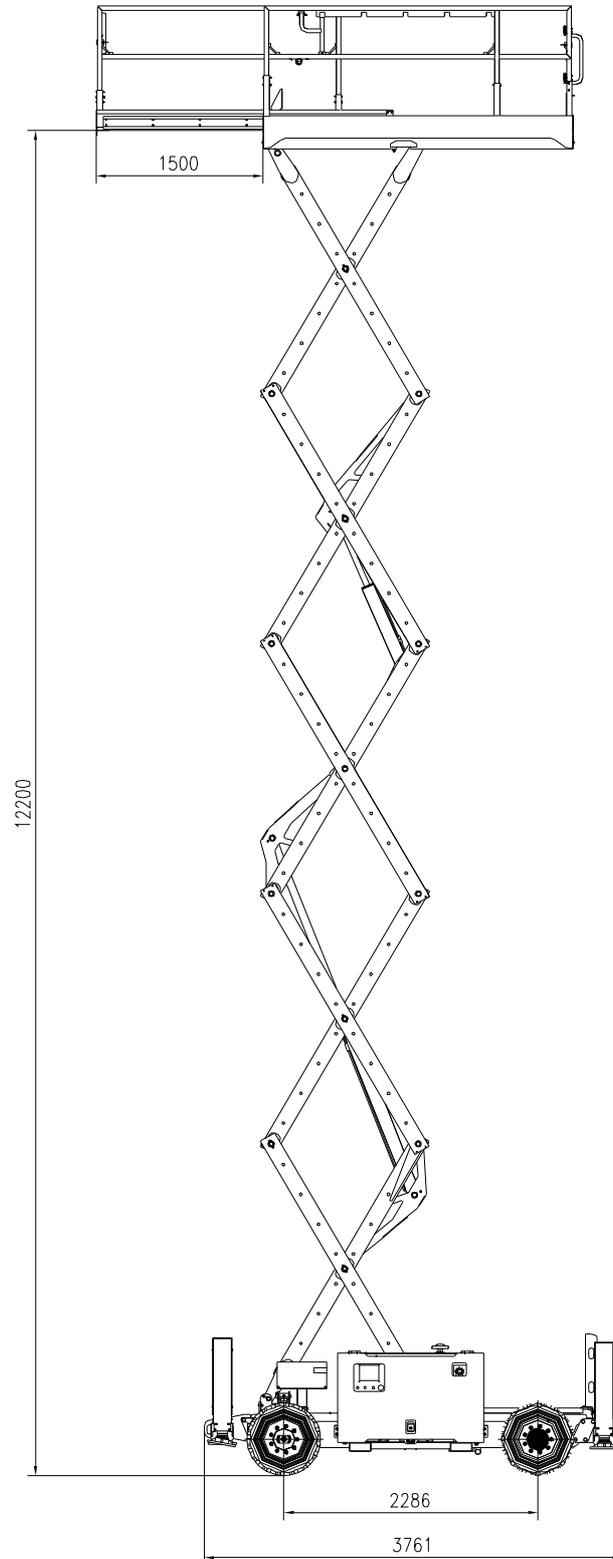
1. Technical Specification

Self-propelled Diesel Scissor Lift GTJZ1218D:

Parameters	GTJZ1218D
Max. Working Height	14.2m
Max. Platform Height	12.2m
Extension Outreach	1.5m
Turning Radius(Outside)	4.6m
Turning Radius(Inside)	2.11m
Gradeability	35%
Load Capacity	365kg
Load Capacity-Extension Outreach	140kg
Driving Speed(Stowed)	0~5.6km/h
Driving Speed(Raised)	0~0.48km/h
Rising Time(Without Load)	55s~65s
Falling Time(Without Load)	26s~36s
Max. Allowable Wind Speed(Indoor)	0m/s
Max. Allowable Wind Speed(Outdoor)	12.5m/s
Max. Allowable Slope(Front/Back)	3°
Max. Allowable Slope (side/side, outrigger retracted/extend)	2°/0.8°
Max. Outrigger Leveling(Front/Back)	5.3° (Front) /4.2° (Back)
Max. Outrigger Leveling(Side/Side)	11.7°
Max. Platform Occupants(Indoor)	3 people
Max. Platform Occupants(Outdoor)	2 people
Max. Allowable Side Force	400N
Max. Noise While Working	82dB(A)
Dimension	
Overall Length (Stowed, with Outrigger/Without Outrigger)	3.77m/3.29m
Overall Width(Stowed)	1.76m
Overall Height(Stowed, guardrail folded)	2.1m
Overall Height(Stowed, guardrail unfolded)	2.73m
Ground Clearance	0.22m
Wheelbase	2.286m
Platform Size(L*W*H)	2.795m×1.6m×1.1m
Overall Weight(With outrigger/Without)	5180kg/4720kg
Tire	26x12-16.5/Solid foam
Hydraulic Oil Tank Volume	37.9L
Hydraulic System Tank Volume	68.1L
Fuel Tank Volume	48L

Control Voltage	12V DC
Drive/ Steer Model	4WD×2WS
Hydraulic System Pressure	24Mpa

2、 Drawings of product design



3、 Technical Configuration

GTJZ1218D Standard Configuration:

Serial No.	Spare Parts Name	Brand & Origin
1	Driving Motor	WHITE,USA/ Sauer- Danfoss, USA
2	Driving Speed Reducer	Fairfield, USA
3	Hydraulic Valve	Hydraforce, USA
4	Storage Battery	VARTA, Germany
5	Engine	Kubota,Japan
6	Gear Pump	Marzocchi,Italy
7	Coupling	KTR, Germany
8	Air Filter	Donaldson,USA
9	Pressure Sensor	IFM,Germany
10	Electric System	USA
11	Hydraulic System	Sinoboom,China
12	Scissor Assembly	Sinoboom,China
13	Working Platform	Sinoboom,China
15	Chassis	Sinoboom,China
16	Paint	Sinoboom,China
17	Others	Sinoboom,China

GTJZ1218D Optional Configuration:

- 1、 Automatic Hydraulic Leveling Outrigger;
- 2、 Hydraulic Generator;
- 3、 Hydraulic Oil Cooler;
- 4、 Working Platform AC Power Socket;
- 5、 Perkins Engine;
- 6、 Charger Wire comply to the standards of Power Socket of different countries

4、 Product Feature

1、 GTJZ1218 technical features

Chassis

Standard configuration: 4-wheel driving and 2-wheel steering

- Ø Max.driving speed 5.6km/h;
- Ø Max. gradeability 35% (4WD), the machine can be stopped at this slope and not falling down, it can restart again under this situation.
- Ø The driving wheel uses standard automatic hydraulic release, the spring impose the braking, the machine can be stopped at this slope (35%) and not falling down
- Ø If the machine requires to be dragged, the connection of the torque hub can be disconnected and then release the braking.
- Ø Equipped with imported original Kubota engine from Japan, engine EURO IV standard, strong driving force.
- Ø The roll-out engine bracket is the design to approach the engine easily, to reduce the maintenance time. Through dismantling the locking bolt, the engine can be rolled out with 90 degrees, it's easy to approach the two sides of engine and make the maintenance.
- Ø Storage battery system- imported original battery, it can be charging through the engine, using for engine start and auxiliary power.

Scissor arms

- Ø Scissor boom design— Stability and reliability, good rigidity, small swinging.
- Ø Boom material—Using standard structural steel design, good looking, quality reliability;
- Ø Double lifting cylinder – reducing the pressure of hydraulic system, making sure that the lifting up and down smoothly without shaking.

Platform

- Ø Aluminum alloy checkered steel plate, good anti-skidding effect, and easy maintenance.
- Ø One way extended platform, it can be pushed easily and stopped any extended positions, easily approaching to the working area.
- Ø The load capacity reaches to 365kg, extended platform load capacity with 140kg.
- Ø

Control System

- Ø Ground controller with fault display (inspecting the machine's working status) and the scissor boom control button, it can be communicated with the platform controller through bus.
- Ø The machine and the component calibration is dealt with the control system, all of the valve and electric components are controlled by the control system (including initial setting and commissioning).
- Ø Fault diagnosis system - the control system can be self-diagnosis and find the typical fault in the system or all of the component related with the system, the fault information will be displayed on the screen with the failure code and buzzer warning.
- Ø The platform controller can realize the functions like telescopic cylinder of outrigger, lifting up/down, driving and steering; the control joystick imported original from USA, flexible operation and durability, it can meet in different working conditions and use frequently.
- Ø All the functions will be operated by the joystick, like driving, steering, lifting up and down, adopting imported proportional controller to control the driving speed.
- Ø Toggle switch controls the engine start, high/low speed, outrigger leveling and power unit.

Safety Device

- Ø Full proportional gradual control - driving, steering, lifting up and down, enabling

the machine to be positioning easily and stable operation even in the compact and narrow working area.

- Ø Oscillating axle - oscillating when stowed, improving the off-road performance; oscillating during the working, improving the passage performance; all the oscillating will be completed by control system automatically, no need manual intervention.
- Ø Providing multiple safety belt hook in the platform.
- Ø Enable switch - the enable switch must be pressed in order to realize all the functions by the joystick.
- Ø Self-levelling platform - the platform is equipped with outrigger levelling cylinder, the platform control box has the leveling joystick, the platform can be leveled less than 0.8 degree through the related control system, enabling the machine to be working in widely working conditions.
- Ø All the functions on the control board with easy understanding symbols.

Hydraulic System

- ü Hydraulic component - driving pump and motor imported original from international famous brand, the high-integrate screw-in valve block is easy to do the maintenance and integrated control.
- ü High-precision hydraulic filter - equipped with oil absorbing filter, oil return filter and high pressure filter, ensuring the hydraulic oil cleanliness of the overall machine.
- ü Open cycle hydraulic driving circuit and proportional function control system - providing incomparable driving power and off-road performance. Much more energy conservation for the proportional controlling the driving, lifting up and down functions, perfectly matching the required speed and reaching the better comfort.
- ü Hydraulic System Module - improving the maintainability and trouble shooting, at the same time providing the reliability. All of the hydraulic component divided

into four hydraulic module, respectively used in double speed braking, 4-wheel driving, oscillating driving, lifting, outrigger levelling and 2-wheel steering functions, improving the reliability and reduce the hose, joint and possible leakage.

Others

- ü Engine continual start protection system: protecting the engine's flywheel ring gear and start motor.
- ü Engine system abnormal auto power-off: when the engine's temperature is too high or the engine oil pressure is too low, the engine will be auto power off.
- ü Overhead door design: easy maintenance for the operator, convenience to do the inner inspection.
- ü Axis pin and axle sleeve: easy maintenance and long life-span usage, all of the axis pin using QPQ treatment, self-lubrication axle bearing.

5、 Product Advantage

Ø Advantages of Technical Parameter

- (1)、 Payload capacity: max.payload capacity with 365kg.
- (2)、 Working range: max working height 14.2m, payload capacity of the extended platform is 140kg.
- (3)、 Gradeability: 35% (4WD)
- (4)、 Max.driving speed: 5.6km/h;
- (5)、 Bus control, simple and reliable, easy maintenance
- (6)、 Imported original PLC, the program can be designed based on the customer's requirement for the individual needs, it also can be working in bad working conditions like dust area, high temperature and high corrosion.

Ø Product Operation Performance

- (1)、 Easy operation, good stability, no impaction, no shaking
- (2)、 Toggle switch, better than touch switch with high reliability

Ø Product Quality Advantage

(1)、The valve, pump, motor, reducer and PLC, all the key hydraulic, electric and transmission components imported original from international top brands (please refer to parts list), with high reliability and stability.

(2)、Steel structure safety factor and stability factor are designed based on CE and AS international standards, making sure for the machine's safety and reliability.

(3)、The parts surface adopts blasting treatment Sa 2.5 class + electrophoretic primer + Nippon finishing coat, with high anti-corrosion.

(4)、All of the axle pin use tempering and QPQ treatment, most of the exposed parts use the galvanizing, chromeplate or electrophoretic treatment, effectively against corrosion.

(5)、Using very strict anti-dust protection for oil cylinder, valve, hose and aluminum tube, each place required the anti-dust will have the anti-dust device.

Ø Product Safety

(1)、The platform can be equipped with anti-collision or height limit device as an option to protect the personal safety.

(2)、The control system will detect the descending travel switch in place and then stop a little while to make sure the safety of descending.

(3)、The machine is equipped with weighing alarming, ensuring the payload capacity within safety range, protecting the machine's safety.

(4)、The control system controls the movement alarming when the lifting up/down and driving together with light and sound alarm.

6. Warranty policy

1. General Condition

Under normal operating conditions, Sinoboom provides the following warranty service based on that the machines are operated and maintained correctly as per instruction in the Operation and Maintenance Manual.

2. Warranty range

I Warranty service and parts including: Structure parts, most of the hydraulic parts, most of the electric parts or related system failure which are under correct operation and regular maintenance following the Operation & Maintenance manual.

I Warranty parts excluding: All wearing parts (Engine filter elements including

air/engine oil/diesel oil, hydraulic system filters, cylinder sealing elements, all the fuses, relays, etc.) , failures caused by hydraulic system cleansing.

3. Warranty contents

- I The machine cannot start or use normally by any reasons such as parts problem, design problem or manufacture problem;
- I Any operation failure caused by welding defect;
- I Joystick failure or hydraulic oil leak caused by the manufacturer assembly process;
- I Engine and motors' warranty will follow the parts manufacturers' warranty manual;
- I Any difference which cannot reach an agreements will follow the third party's inspection reports;

4. Other related service

- I Free remote guidance about installation and adjustment for new delivery machine;
- I Periodically inspect the machines condition and instruct maintenance and repair, free within the warranty period and at cost when out of warranty;
- I Free parts replacements for quality claims within the warranty period, and at cost when out of warranty;
- I Long time technical service, maintenance services and training services after warranty period, parts and labor will be at cost;

5. "5+2+1" Warranty period

- I The big structure parts including chassis, turntable, booms, outriggers, telescopic shafts, engine bracket, will be guaranteed five years or operation time add up to 6000 hours, whichever comes first;
- I The complete appliance will be guaranteed one year or operation time add up to 2000 hours, whichever comes first;
- I Detailed guarantees classification and timetable please refer to the list in the sinoboom warranty manual;
- I Warranty period will be calculated starting from the machines arrival at buyers' stock yard;
- I After the warranty period, Sinoboom still offers life-long maintenance, spare parts supply and technical support services with cost charged.

6. Conditions not applied to this Warranty Policy

- I Not following the manuals to operate the machines, nor to maintain the machines periodically;
- I Rebuilt, parts replace or personally repair without Sinoboom beforehand confirmation

from Sinoboom;

- I Parts normal wear under daily usage;
- I Usage of parts which are not sinoboom original parts without beforehand confirmation from Sinoboom;
- I Machines are wrongly installed or used, or machines are used under abnormal conditions, or machines are treated with improper parts like fuel oil, engine oil or lubricating oil; event under accident or fire or other force majeure.
- I Continuous operations on the machines even spotted some problems or failures without timely quality claim, which results further damages.

7. Our service promises

- I Our service team is 24 hours available online to receive your quality claims;
- I We will reply your phone call or emails within 2 hours by receiving;
- I For better, faster and exact service, you will have to fill and report your claims under our sheets and related requirements;
- I If any claims about our service, we will quickly react and give you a reasonable response accordingly;
- I Sinoboom reserves the right of final explanation about the above warranty policy;

SINOBOOM ADR Certificates- For Australia & New Zealand market



Assemble workshop glance



