

Science and technology environmental protection
The first electric micro digging



QUALITY CHANGES THE WORLD



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This manual was printed in August 2022 and product information is subject to change as you read it.

Products (including specific configurations, related details, etc.) are subject to the specific models and products suitable for Chinese mainland displayed and sold by the agent.

For more details, please visit the local authorized agent of Sany Heavy Machinery.

NEW SY19E

Electric excavator



High efficiency energy saving
Safe and reliable



Product highlights

SY19E is the first mini electric excavator series products launched by Sany. It has the characteristics of high efficiency and energy saving, science and technology environmental protection, safety and reliability, durability and so on. At the same time, it can provide a variety of special configuration site selection to meet the needs of different countries and customers.



High efficiency and Energy saving

High-torque permanent magnet synchronous motor, electric drive + hydraulic control, quick response, high precision, more operation.
Pure motor output efficiency is 95%, efficiency is 3% higher than fuel version, energy consumption is 30% lower than fuel version.



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Pure electric, zero emission, optional maintenance-free bushing.
Vehicle-borne Internet of Things, new touch screen, one-button startup, system fault self-diagnosis.



Safety and Reliability

Vehicle insulation detection, high voltage interlock, over temperature protection, charging safety detection, high voltage electrical components protection level up to IP67
New energy vehicle safety level, safe construction without dead Angle.



Durability

Large capacity battery, a full battery life of 4-6h.



Charging mode

Compatible with all scenarios: AC220V household AC power and AC380V industrial AC power.
Car charging pile, vehicle mobile charging station.

Safe and reliable three-power system

High power motor

Customized permanent magnet synchronous motor, with high power density, high efficiency, safety and reliability, low energy consumption characteristics.

Integrated type controller

Configuration of customized multi-in-one integrated controller, using a high degree of circuit integration, to achieve the electric drive MCU function, three-phase AC charging OBC function, low-voltage power supply DCDC function, vehicle control VCU function, at the same time with power precharge auxiliary function, small size, high integration.

Large capacity meter

The high performance lithium ion battery has the advantages of high power density, high protection level, long battery life, short charging time, safe and reliable, intelligent fault diagnosis and so on.



Science and technology, environmental protection

Battery life: single charge, battery life 4-6h

Charging mode: civil power, industrial power, car charging pile, and trolley car

Charging duration: 1h for DC fast charge and 2.5h for AC slow charge

Maintenance: Three electricity free maintenance, saving nearly one thousand yuan every year

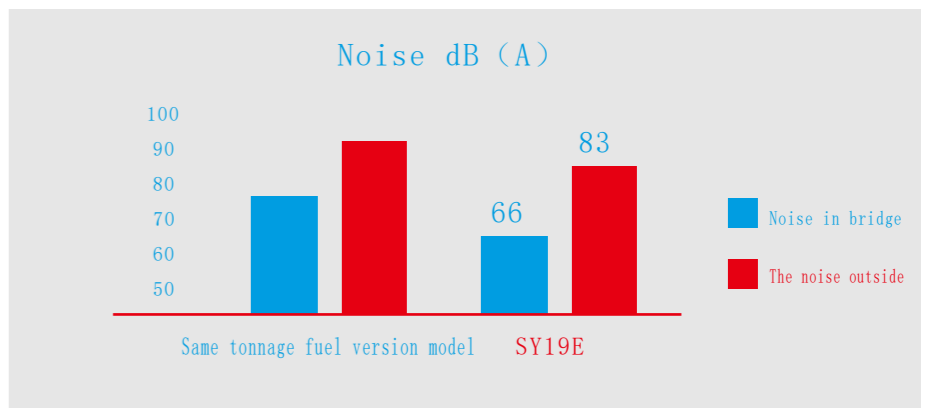
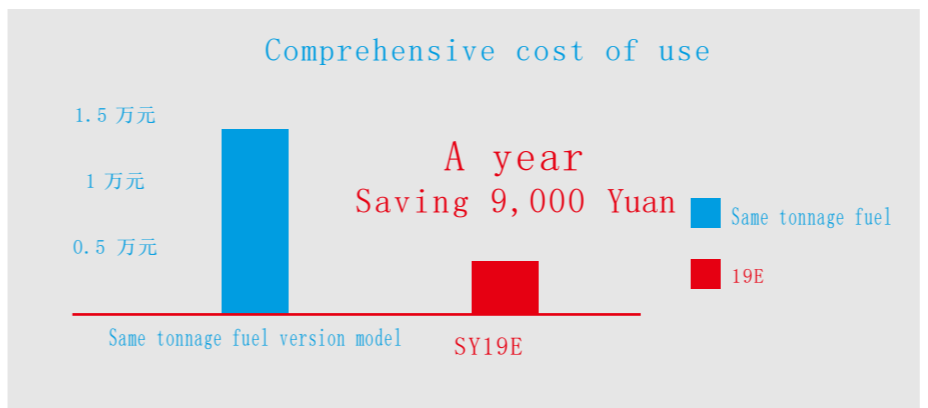
Safe and reliable: new energy vehicle safety level, safe construction without dead Angle

Clean environmental protection: pure electric, zero emission, optional maintenance free sleeve



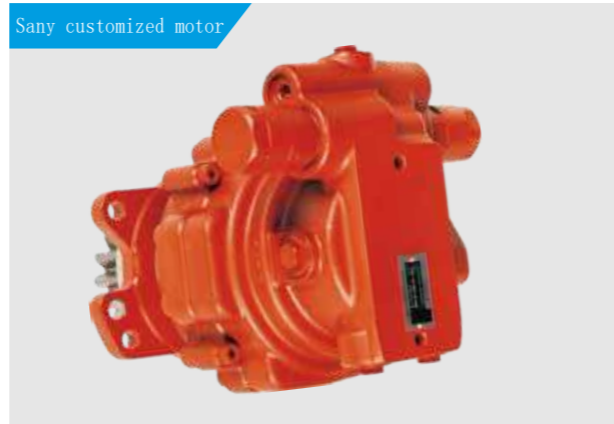
High efficiency and energy saving: The efficiency is 3% higher than the fuel version, and the energy consumption is 30% lower than the fuel version

Quiet and comfortable: outside noise 83dBA ear noise 66dBA



Hydraulic control system

- High equipped with MVP30 main pump, with constant pressure variable and load sensitive function, displacement in the same tonnage of products in excellent performance, more compliant, sensitive, better coordination.
- Sany main valve adopts Wolfe hydraulic control multi-way valve to realize the control of each actuator, which is more suitable for Chinese working conditions, with small pressure loss and low energy consumption.



- Advanced SLSS hydraulic system: Precise flow control according to load changes, excellent microoperation performance, like the human hand.
- Full hydraulic control: All actions adopt pilot hydraulic control, no air stroke, good microcontrol, safe and accurate, more smooth action, lower fuel consumption.



Brand new cab

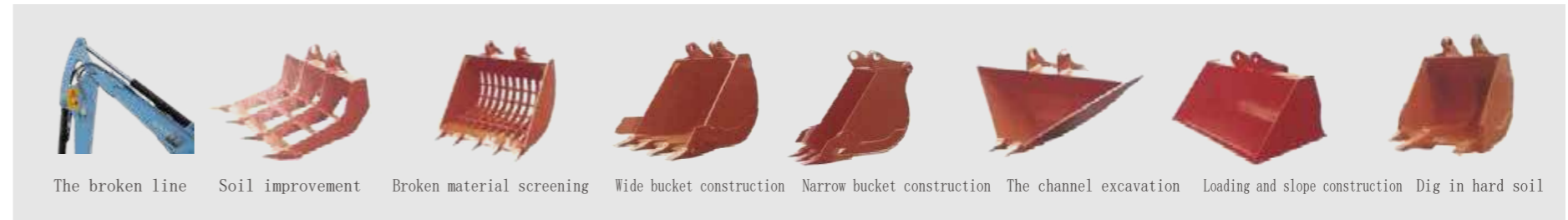
New 7-inch touch control screen, integrated button operation panel, with AC slow charge and DC fast charge function, pedal new layout, more convenient control, more convenient use, create a comfortable operating environment.

- It is equipped with intelligent control large screen independently developed by Sany to display the main mechanism weight information in real time, realizing one-click startup of the host, complete display information, multi-level page turning and intelligent human-machine interaction.
- It is equipped with 680mm high backrest seat with adjustable front and rear seats and foldable backrest for more comfortable driving.
- Foot space reserved 300mm large space, operation and driving more comfortable.



A tractor serves several purposes

Standard single-double auxiliary pipeline and cut-off valve, can be directly installed crushing hammer and other auxiliary tools, add no markup, and then with some small tools, 18 martial arts, proficient in everything.



Flexible and durable structural device

Boom stick

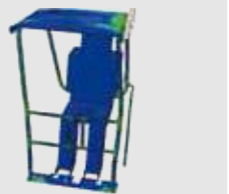
- Boom bucket rod strong and durable, performance is better than the industry level.
- Add stop valve for auxiliary pipeline, replace it with no oil leakage.
- Extended bucket bar is standard for larger working range.



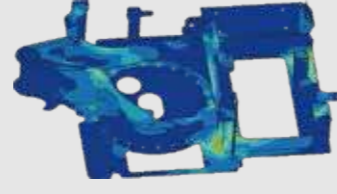
Reinforced frame

- Enhanced working device, compared with competing products, the boom section is strengthened by 20%, the bucket bar section is strengthened by 65%, and the muscles and bones are more robust.
- At the same time, the advanced digital analysis software is used to optimize the structure, reduce stress concentration, and prolong the average life by 30%.

Driving shed TOPS/ROPS analysis



Driving shed CAE analysis



Deflector device

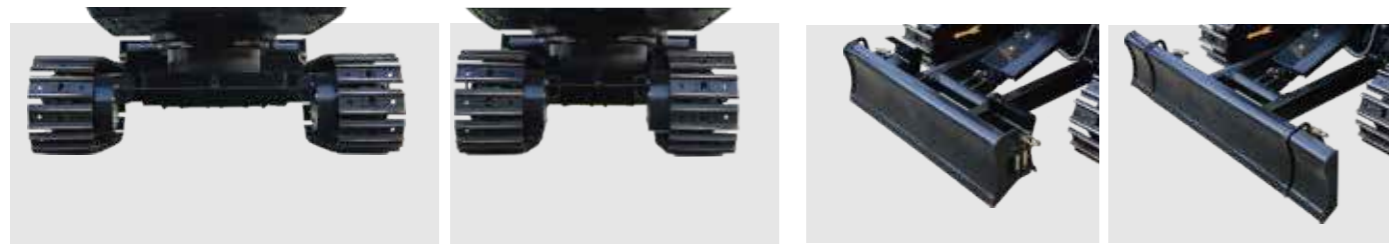
The range of deflected working device is 595mm on the left and 350mm on the right. Both sides can be easily dug to the outer edge of the track. It can work in the wall corner and other space restricted positions.

Flexible and convenient retractable walking frame

- The adjustable width range of the retractable walking frame is 980mm-1350mm, which improves the stability of the whole machine.
- It can realize the exchange of rigid track and rubber track to meet the needs of various working conditions.

Swivel shovel

The rotary plug-in shovel ensures passability, allowing the excavator to easily pass through less than 1m of work space, improving operation efficiency.



Flexible, efficient and versatile

Complete research and development test system

- Complete R & D test system is the strong backing of excellent performance.
- Fully functional durability test center, each type of excavator must experience more than **2000 hour** of field excavation test.
- The working device, cab, hydraulic components and other heavy parts must undergo more than **80,000** fatigue tests.



Advanced manufacturing technology

- Advanced manufacturing technology is a reliable guarantee to create excellent products.
- Sany has RGV assembly line, automatic welding robot, high precision machining equipment and precision machining center
- Sany's manufacturing and assembly lines won the 2013 National Five-star Field Award, 2014 National Quality Award and other awards.



Recoverable

- Full metal covering parts, durable and recyclable, green and environmental protection.
- Do not use fiberglass and other non-durable and easy to cause pollution materials.



Environment protection

- Equipped with environmental protection countermeasures engine, in line with the latest national III standards.
- Adopt aluminum radiator, oil cooler.
- The use of environmental protection paint, effectively reduce the pollution to the environment.
- Garden-style manufacturing site.



Safety configuration in line with international standards

Security certificate

- It meets the safety standards of China, the European Union, North America and other regions
- SY19E cab is designed with anti-rollover and falling object structure and has obtained **TOPS 和 FOPS** safety certification.



Failure-free duration authentication

- The survey results of China Quality Association show that the average trouble-free working time of Sany excavator is better than the industry level.
- SY19E has made many improvements in structural parts and failure rate reduction, and the reliability of the whole machine is better than the industry level.



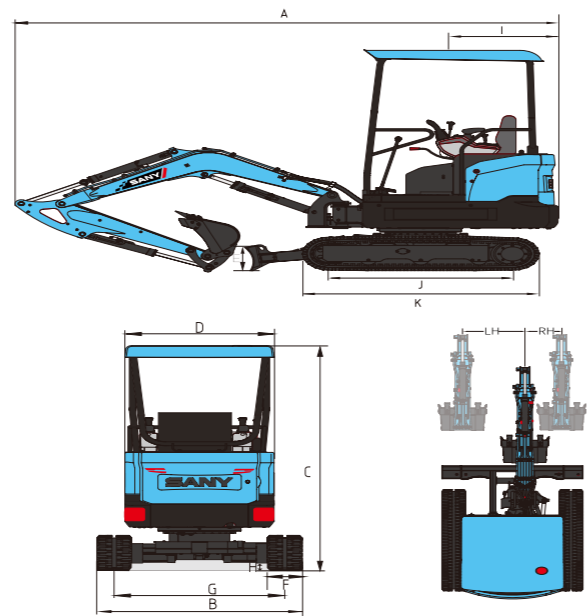
User Satisfaction Award

Customers say good is really good, win with its quality, recognized by customers and the industry, won the construction machinery user satisfaction award.

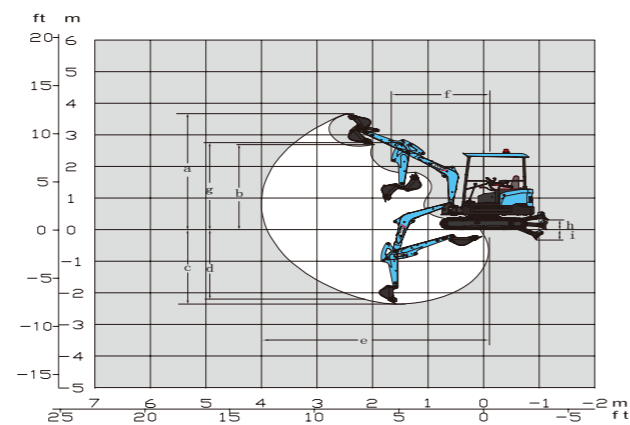


Technical Specifications

The whole machine size (mm)	SY19E
A. Total length(transport)	3624
B. Total width	980/1350
C. Total hieight (transport)	2640
D. Width of driving shed	980
E. Height of pushing board	270
F. Track width	230
G. Gauge(transport/operation)	750/1120
H. Minimum ground clearance	160
I. Tail radius of gyration	920
J. Gauge	1225
K. Track width	1585



The whole machine size (mm)	SY19E
a. Maximum digging height	3665
b. Maximum unloading height	2635
c. Maximum digging depth	2360
d. Maximum vertical arm excavation depth	2215
e. Maximum digging radius	4000
f. Minimum radius of turn	1655
g. Maximum height at minimum radius of rotation	2745
h. The earth moving plate raises the maximum ground clearance	310
i. Maximum depth of earthmoving plate sinking	320
rh/lh. Maximum deflection of bucket	350/595



Note: As technology is constantly updated, materials and technical specifications are subject to change without notice, and the machine pictured may include additional equipment.

Standard configuration

Configuration		Configuration	
Driving tent	●	Grease gun	●
230mm rubber track	●	LED Work Light	●
An extended shovel	○	Electric proportional handle	○
Car charger	●	Mode switching valve	●
12v Power socket	○	Turning alarm light	○
Battery pack	●	Seat belt alarm light	○
Independently controlled auxiliary line	●	Yellow alarm light	○
Straight line walking function	●	Boom LED working light shield	●
Arm working light protective cover	●	Boot password	●
110 v charging line	○	Running the alarm	○
220 v charging line	○	Mechanical quick change	○
380 v charging line	●	Hydraulic quick change	○

● According to the standard ○ Said matching