



# SY19E

**Rated power**  
15kW/2000rpm

**Bucket capacity**  
0.04m<sup>3</sup>

**Operating weight**  
1950kg



SANY HEAVY MACHINERY LTD  
<http://www.sanyglobal.com>

This manual was printed in 2023. The product information may have been changed when you read it. Products (including specific configuration, detail, etc.) are based on the specific models and products applicable to markets outside China, which are displayed and sold by agents. For more details, please visit the local authorized agent of SANY Heavy Machinery Ltd.

# The core configuration is energy efficient



## High power motor

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



## High performance battery

High-performance lithium-ion batteries have the advantages of high energy density, safety and reliability, and intelligent fault diagnosis.



## Integrated controller

It is equipped with a customized all-in-one integrated controller and uses a high degree of circuit integration to realize electric drive MCU functions, three-phase AC charging OBC functions, low-voltage power supply DCDC functions, and high-voltage system PDU functions. It also has vehicle control VCU functions. All of these are within a compact and highly integrated form factor.



## Main pump

Highly equipped with an MVP30 main pump, with constant pressure variable and load sensitive function, displacement in the same tonnage of products in excellent performance, more compliant, sensitive, and better coordination.



## Main valve

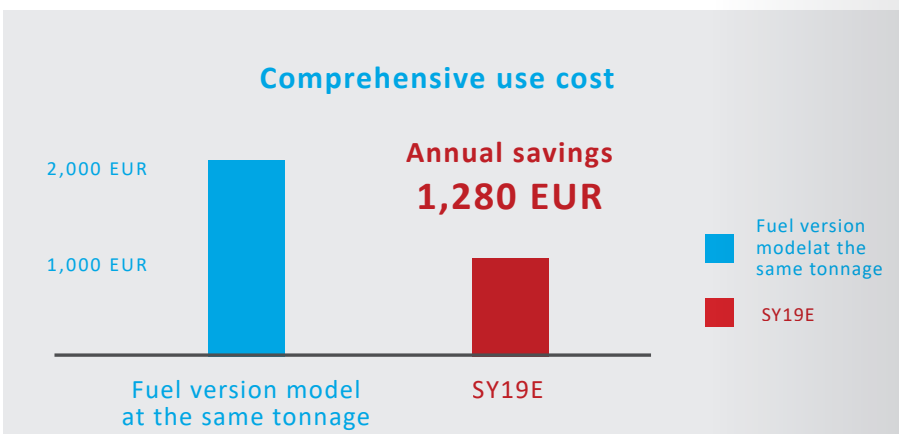
SANY main valve adopts a Wolfe hydraulic control multi-way valve to realize the control of each actuator, which is more suitable for Chinese working conditions, with small pressure loss and low energy consumption.



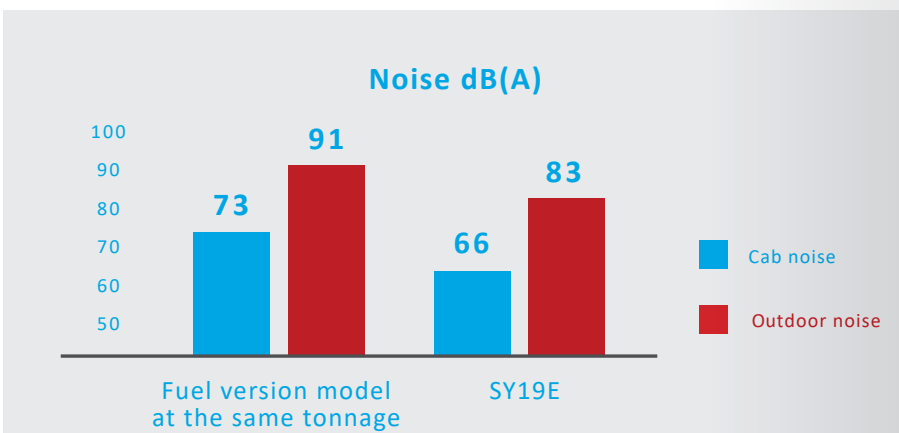
# The multifaceted warrior is small and delicate

The SY19E represents Sany's inaugural series of mini electric excavators, embodying features of high efficiency, energy conservation, environmental protection via technologies, safety, reliability, and durability. Moreover, it offers diverse special configuration site options, catering to the varied requirements of different countries and customers.

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



## Comfortable driving

The seat depth of the new seat cushion is adjustable, and the mechanical lumbar support enhance overall seating comfort.

The new 7" touch screen, seamlessly integrating Bluetooth, air conditioning, and various other functions, represents a harmonious fusion of cutting-edge technologies and intelligent features.

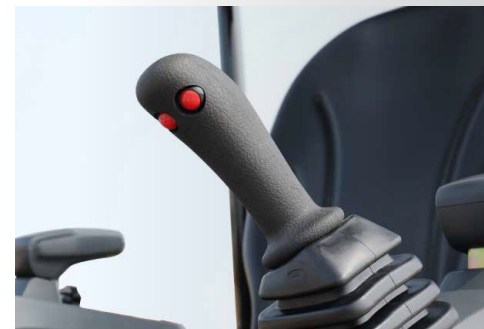
### Intelligence

New 7" display, real-time display of battery power and water temperature, integrated key operation panel, one-key start, fault self-diagnosis and other intelligent configurations.



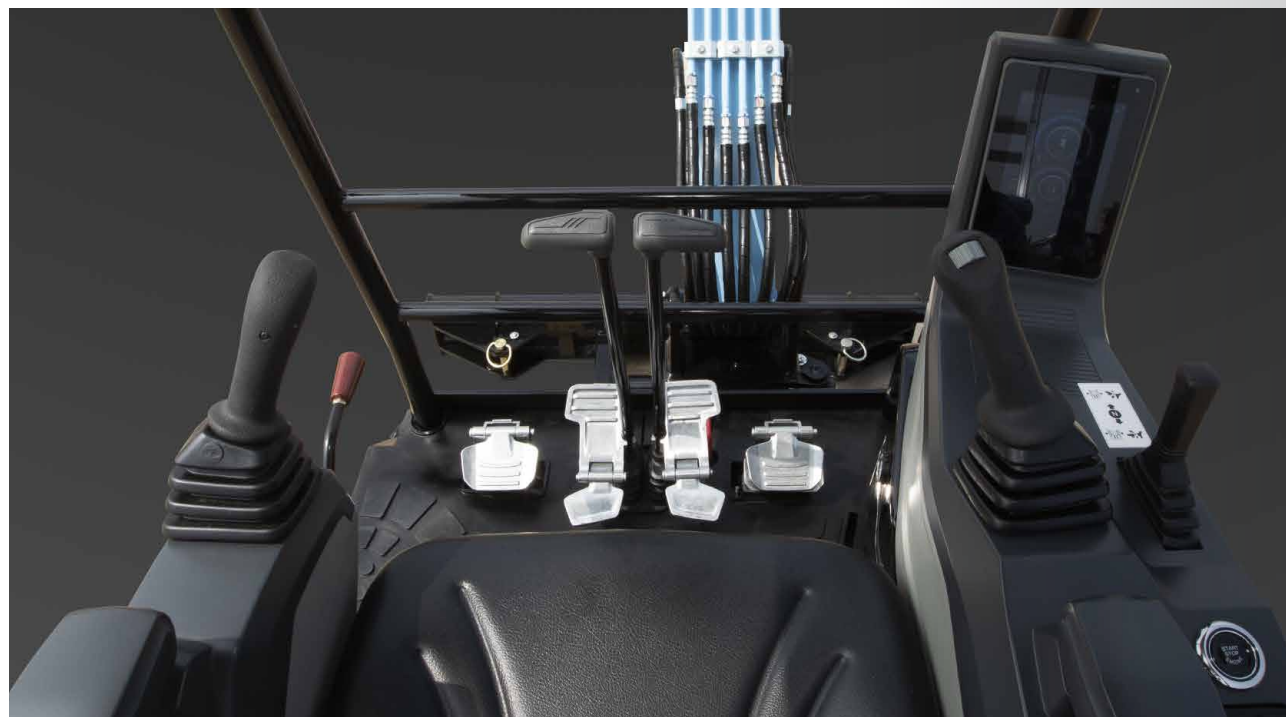
### Quiet and comfortable

Cab noise is reduced to 66 decibels, with the volume equivalent to the volume of the meeting speech, farewell to noise interference.



### Seat upgrade

It features a 680mm high backrest seat that offers front and rear adjustments, featuring a foldable backrest for enhanced driving comfort. With a generous 300mm of reserved space, it provides ample room for operation, ensuring a more comfortable driving experience.



## Complete research & development and test system

SANY has established a complete machine endurance test center with full functions. Each model of excavator must be subjected to over 2,000h field excavating test.

Key components like working device, cab and hydraulic components, etc. must be subject to fatigue test over 800,000 times.



## Advanced manufacturing technology

SANY has an RGV assembling line and full automatic welding robots, and possesses high precision machining equipment and a precise machining center.

SANY's manufacturing and assembling lines won a five-star national site recognition in 2013 and national quality award in 2014. In 2023, SANY Mini Excavator Factory was awarded as the intelligent factory.



# Advanced energy saving technology

## Advanced SLSS hydraulic system:

Precise flow control according to load changes, excellent microoperation performance, like the human hand.

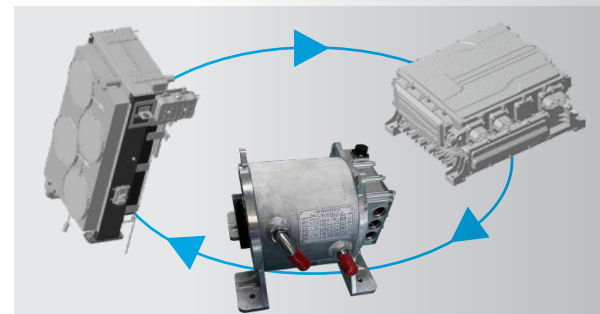
## Full hydraulic control:

All actions adopt pilot hydraulic control, no air stroke, good microcontrol, safe and accurate, more smooth action, and lower fuel consumption.



## Intelligent thermal management system

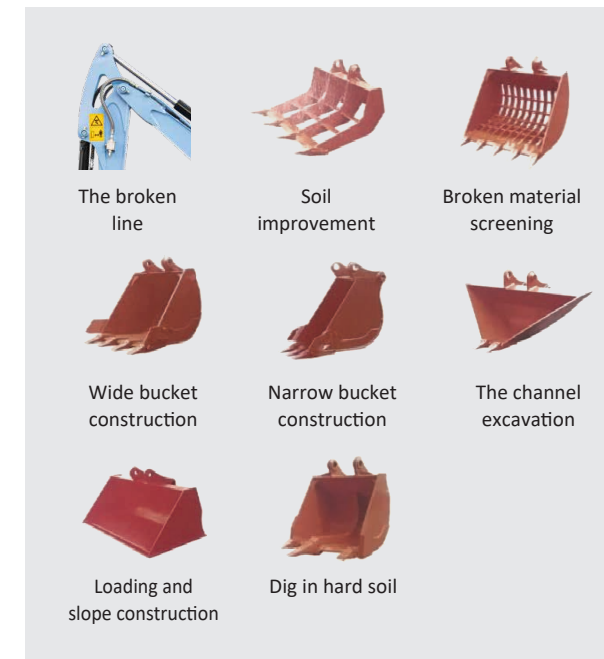
Equipped with multi-stage high-power electronic fan, hydraulic oil radiator - electronic coolant radiator series arrangement, independent temperature control - thermal management controller. The electric motor incorporates a series circulation liquid cooling system, ensuring efficient heat dissipation and reducing energy consumption by 30%.



# Advanced energy saving technology

## A tractor serves several purposes

The standard single-double auxiliary pipeline with a cut-off valve allows for the direct installation of crushing hammers and other auxiliary tools without additional markup. Coupled with various small tools, it offers versatility in handling a range of tasks, making it proficient in various applications.



## Swivel shovel bucket

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



## Boom and arm

Boom and arm are strong and durable, with performance surpassing the industry standards.



## Deflector device

The working device has a deflection range from 595mm on the left to 350mm on the right, facilitating easy excavation to the outer edge of the track on both sides. 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, improving the stability of the whole machine.

- It can realize the exchange of rigid tracks and rubber tracks to meet the needs of various working conditions.



# Maintenance and service



## Smart and convenient charging

Compatible with DC charging piles, industrial electricity, civil electricity, charging vehicles and other charging modes, ensuring convenient and flexible charging.

## Low maintenance cost

Sandian system adopts international famous brand, with the maintenance only for the hydraulic system, reducing maintenance costs by 80%. Pure electric power, energy consumption is more than 50% lower than diesel engines. It can utilize Party A's power supply indoors and in the basement, resulting in use cost savings.

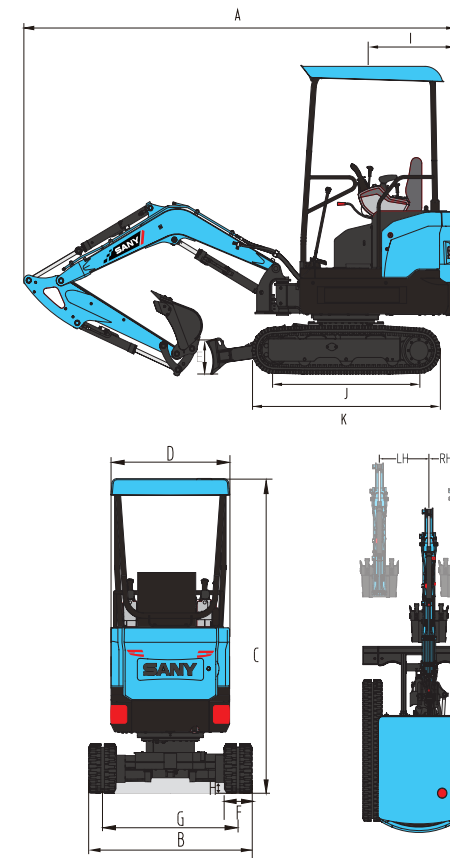


# Technical specification

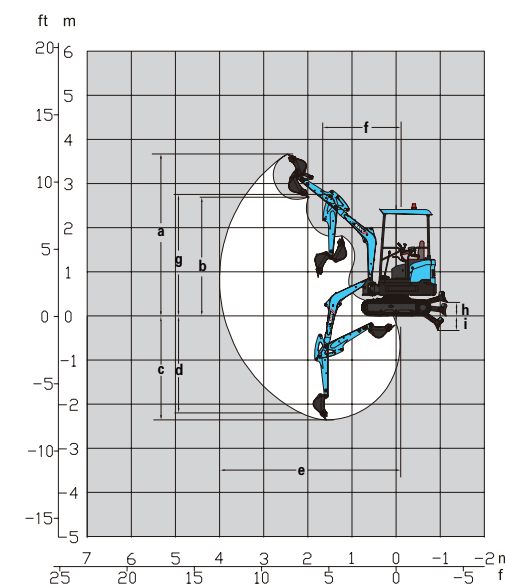
Specification	SY19E	Main performance	SY19E
Working weight	1950 kg	Traveling speed ( high and low)	3.2/2.3 (km/h)
Bucket capacity	0.04 m <sup>3</sup>	Gyration speed	10 r/min
Electromotor	Permanent magnet synchronization	Grade ability	50.6°
Weight of motor	26 kg	Ground pressure	0.028 mPa
Rated power	10 kW/2000 rpm	Bucket digging force	15.2 kN
Peak power	15 kW	Digging force of bucket bar	9.2 kN
Nominal torque	44 Nm	The main pump delivery	30 mL/r
Rated power	2000 r/min	Maximum system flow	90 L/min
Power battery	lithium iron phosphate	Main relief valve pressure	24.5 mpa
Reference voltage	358 V	Overload working pressure	27 mpa
Standard capacity	67 A·h		
Total energy	24 kW·h		

Traveling part	SY19E
Number of track chain plates	2
Track rollers on each side	3
Track width mm	230 mm

# Technical specification



Overall size(mm)	SY19E
A. Total length (during transportation)	3624
B. Total width	980/1350
C. Total height (during transportation)	2440
D. Width of cab	980
E. Shovel bucket height	270
F. Track width	230
G. Track gauge	750/1120
H. Min. ground clearance	160
I. Tail gyration radius	920
J. Grounding length of track	1225
K. Track length	1585



Scope of operation(mm)	SY19E
a. Maximum digging height	3665
b. Maximum unloading height	2635
c. Maximum digging depth	2360
d. Max. vertical digging depth	2215
e. Maximum digging radius	4000
f. Min. gyration radius	1655
g. Max. height at min. gyration radius	2745
h. Max. lift height of shovel bucket	310
i. Max. sinking depth of shovel bucket	320

Note: As the technology is constantly updated, materials and technical specifications are subject to change without prior notice, the machine in the photo may include additional equipment, and the \* number in this manual is based on the actual vehicle configuration.

# Standard configuration

Collocation		Collocation	
Cab	•	Grease gun	•
230mm rubber track	•	LED working light	•
Extended shovel bucket	○	Electric proportional handle	○
Car charger	•	Mode switching valve	•
12V power outlet	○	Turning warning light	○
Battery pack	•	Seat belt alarm light	○
Independently controlled auxiliary line	•	Yellow alarm light	○
Straight line function	•	Boom LED working light shield	•
Arm working light protective cover	•	Power-on password	•
110V charging line	○	Traveling alarm	○
220V charging line	•	Mechanical quick-change coupler	○
380V charging line	•	Hydraulic quick-change coupler	○

• According to the standard ○ Said matching