

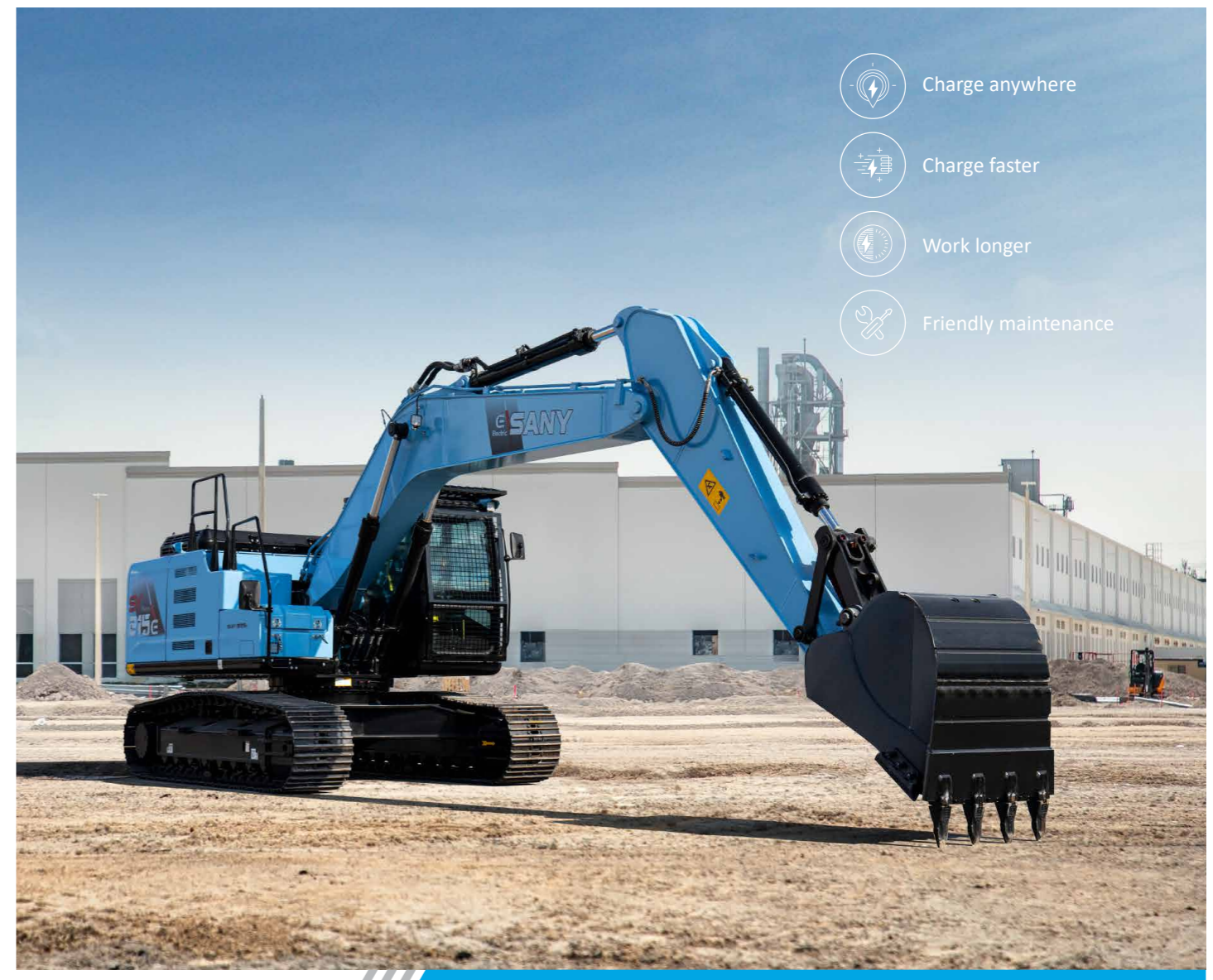



# SY215E


**Engine power**  
150kW/1800rpm


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


**Operating weight**  
23200kg



 Charge anywhere

 Charge faster

 Work longer

 Friendly maintenance



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.



## Sany electric excavator

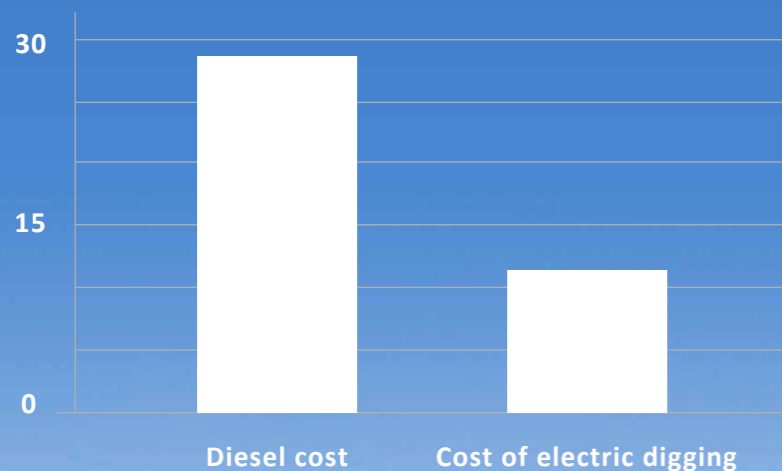
Electronic control plus scientific and technological intelligence



# The choice of intelligent pure electricity value

SY215E is a new 21T class electric earthmoving excavator built by SANY Heavy Machine, specially designed for earthmoving conditions, taking into account stone work, suitable for tunnels, steel mills, scrap mills, municipal engineering and other working scenes, with energy saving and environmental protection to improve customer investment return as the goal, equipped with special functions for tunnel construction.

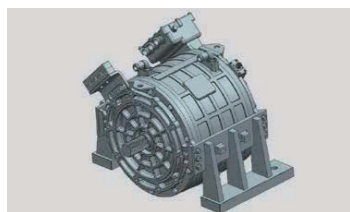
According to 3000h per year, it can save 180,000 per year



Oil mining: oil price 7 yuan /L, fuel consumption 14L/h; Electricity mining: Electricity price 0.7 yuan /h, energy consumption 50 degrees /h (Since the price of oil and electricity fluctuates with the market, the data is for reference only.)



# The core configuration is energy efficient



## High power motor

The customized permanent magnet synchronous motor has the advantages of high power density, high torque density, high efficiency, safety and reliability, and low energy consumption.



## High Performance Battery

The 422KWh 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. International first-class brand lithium ion standard battery pack, more than 10 years of designed service life, a charge can comprehensive battery life of 6-10h.



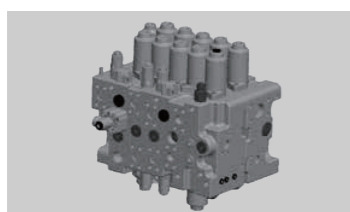
## Integrated Type Controller

Configuration of customized multi-one inherited 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 DC/DC function, vehicle control VCU function, at the same time with the power precharge auxiliary function, small size, high integration.



## Main pump

With K7V125 main pump, using the new fourth generation hydraulic system (electronic positive flow system), displacement in the same tonnage of products in the performance, more compliant, sensitive, better coordination.



## Main valve

Sany main valve adopts Kawasaki developed products, new additions of the middle oil circuit cut-off, bucket rod 2 valve core electronic control and other functions, low pressure loss, low energy consumption.



# Advanced energy saving technology

## Dynamic optimization intelligent control system

Equipped with fully electronically controlled "positive flow" system and SANY's self-developed "DOMCS" motor-hydraulic pump-main valve integrated dynamic optimization intelligent control system, follow up the optimal output power required by the load.

Efficiency improvement **8%**. Energy consumption reduction **10%**.

## AOCT self-optimizing control technology

Equipped with multi-stage high-power electric control fan, intelligent speed control, hydraulic oil radiator - electronic coolant radiator independent arrangement, independent temperature control - thermal management controller, motor electric control using series circulation liquid cooling system to ensure heat dissipation efficiency.

Energy consumption reduction **30%**. Noise reduction **20%**.



## Advanced machine control system

The main spool is fully electronically controlled. The main valve spool is all electrically controlled, the control is more flexible, and the human-machine interaction is more friendly.

High performance controller  
Match high-performance controller and optimize control algorithm.

System security protection  
Add safety functions such as abnormal alarm/emergency stop/start diagnosis/redundancy control when the system is abnormal to ensure man-machine safety.

## Smart and convenient charging



Standard with 2 national standard charging ports  
Supports DC fast charging

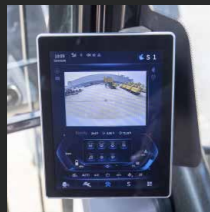


Intelligent monitoring of charging status  
Optional high-power split type,  
Integrated DC quick filling pile  
Charging time  $\leq 1.5$  hours

# Full cockpit upgrade

New 10-inch color LCD display, integrated key operation panel, power management module, USB interface, pedal new layout, easier to control, more convenient to use, to create a comfortable operating environment. High-definition large-size touch screen, real-time display of battery power and water temperature, one-click open automatic air conditioning, a variety of working modes are optional, real-time view of machine information, support online upgrade, optimize control performance at any time, intelligent fault self-diagnosis, maintain the best working state, backhand operation one-click switch, work efficiency increased by 8%.

Equipped with multi-stage high-power electric control fan, intelligent speed control, hydraulic oil radiator - electronic coolant radiator independent arrangement, independent temperature control - thermal management controller, motor electric control using series circulation liquid cooling system, to ensure heat dissipation efficiency, energy consumption is reduced by 30%, noise as low as 71dB(A).



New 10-inch color display



Integrated key panel



Multi-directional adjustable suspension seat



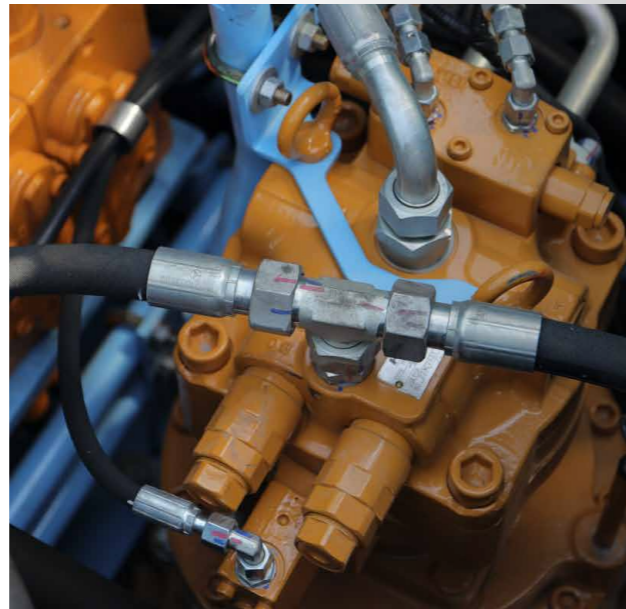
Large area skylight



New layout air outlet



# Maintenance and service
















## Convenient maintenance

The large-area covering piece is opened. After opening, it can stand on the ground for daily maintenance and maintenance, which is convenient for maintenance and good accessibility. For harsh working conditions, strengthen the convenient design of maintenance parts replacement, "large space, easy to start", and increase the operating space of various maintenance parts replacement by 20%-30%.

Radiator: The external protection network is specially designed, the dirt is blocked in the outside of the protection network, just remove the protection network to clean.

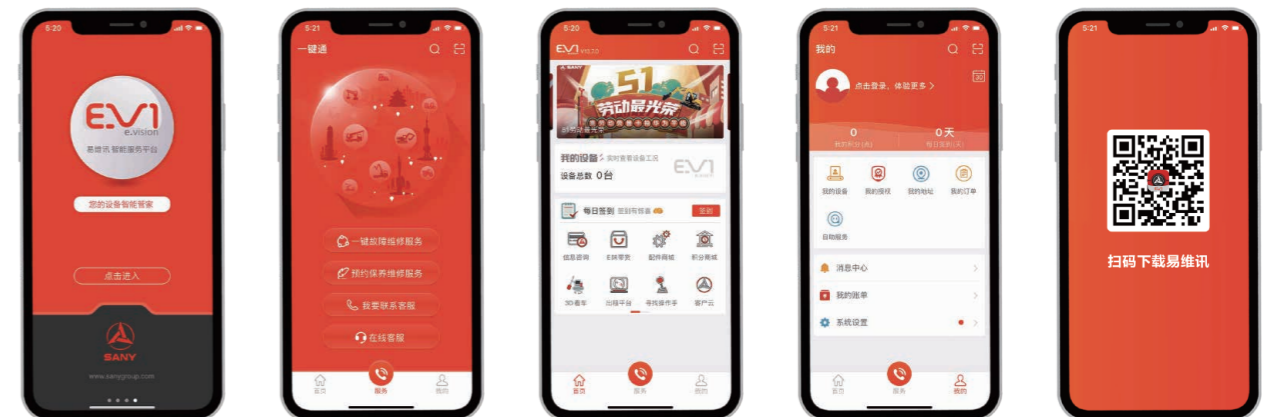
## Worry free after sale

The national agents and the world's five regional agents provide a strong guarantee for Sany's after-sales service, "5231", "110", "111" commitment for the global service.

 <p><b>Service 4.0</b> "5231" life without worry</p>	 <p><b>Service "110"</b> Satisfactory China Tour</p>	 <p><b>Service "111"</b> Comprehensive and thoughtful</p>
 <p><b>5 fold</b> Regeneration replacement of heavy parts can save up to 50%</p>	 <p><b>1</b> 151 Process standard Customer problems at the touch of a button</p>	 <p><b>1 Advanced equipment:</b> Single equipment service resources, higher than the industry standard.</p>
 <p><b>2 fill</b> 24 hours troubleshooting, 12 hours compensation desk shift</p>	 <p><b>1</b> The service radius is less than 100 km</p>	 <p><b>1 One click:</b> As long as you APP a key call, I will do it all.</p>
 <p><b>3 protect</b> Micro digging, small digging machine provides 1 year /3000 hours warranty. Over 19 tons of large excavator extended warranty to 3 years /7000 hours.</p>	 <p><b>0</b> AR remote diagnosis zero distance</p>	 <p><b>1 One to one exclusive Honor service:</b> Special service, exclusive honor.</p>
 <p><b>1 send</b> Micro dig, small dig: send 7 free spot check within 10000 hours. Medium dig: send 9 free spot checks within 10000 hours. Big Dig: 11 free spot checks within 10,000 hours.</p>	<p>Note: The above services can only be effective after signing a special agreement</p>	

## e-Visun

Sany excavator is equipped with self-developed "Yiwei Xun" system to build an intelligent construction management system and lower management costs. The mobile phone can be controlled with one key through the e-visun APP, check the machine status, and book various services online.



# Production research and development system



Sany Heavy Machine global research and development center



## Advanced manufacturing technology

Advanced manufacturing technology is a reliable guarantee for creating excellent products. Sany has RGV assembly line and automatic welding robot, with high precision machining equipment and precision machining center.



## Complete R & D test system

Complete R & D test system is a strong backing for excellent performance. Complete machine durability test center, each excavator must experience more than 1500 hours of field excavation test.

The working device, cab, hydraulic components and other heavy components must undergo more than 300,000 fatigue tests.

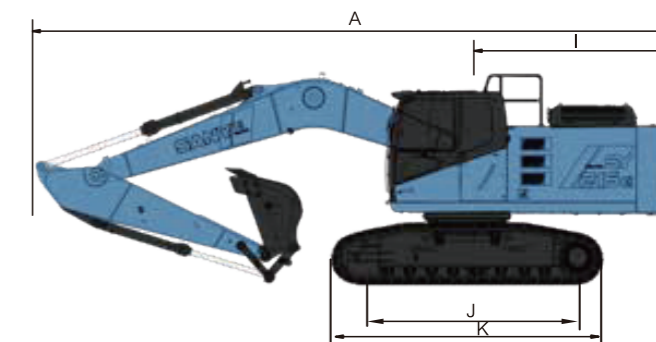
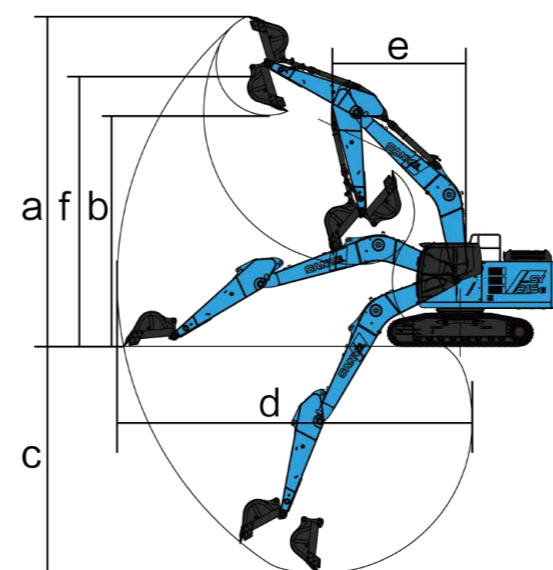
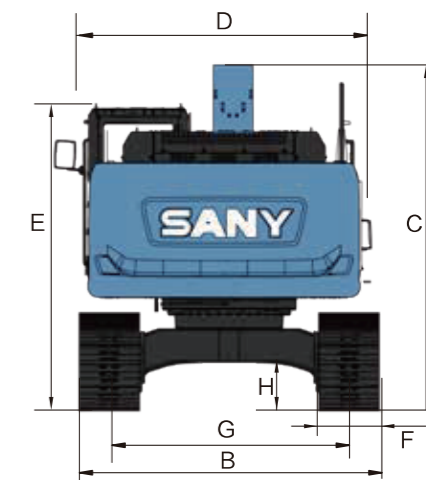


## Safety certification

Advanced profile skeleton design, fully meet the European standard ROPS safety requirements after 30h high strength bench vibration test, safe and sound.

# Technical specification

Specification	SY215E	Overall size(mm) SY215E	Operating range (mm) SY215E
Machine weight	23200 kg	A.Overall length	9910
Bucket capacity	1.1(0.8-1.2) m <sup>3</sup>	B.Overall width	2980
Rated storage energy	422 kWh	C.Total height	3440
Integrated battery life	6-10 h	D.Upper width	2875
motor	Permanent magnet synchronous AC motor	E.Total height (top of cab)	3075
Rated power	150 kW/ 1800 rpm	F.Standard track plate width	600
Travel speed (high/low)	5.4/3.3 (km/h)	G.gauge	2380
Turning speed	12.5 rpm	H.Minimum ground clearance	440
Tractive effort	220 kN	I.Tail radius	3125
Climbing ability	70%(35°)	J.Track grounding length	3445
Bucket digging force	138 kN	K.Track length	4250
Bucket rod digging force	103 kN		





# Standard configuration

Three-current system	Cab	Lower walking body
Lithium-ion battery pack ●	Soundproof steel cab ●	Walking motor guard plate ●
Permanent magnet synchronous motor ●	Reinforced light glazing ●	Track guide mechanism ●
Integrated controller ●	Silicone oil rubber shock absorber ●	Track tightening mechanism ●
Battery self-heating ●	Open roof, front wall upper Windows and doors ●	Driving wheel ●
High voltage interlock ●	Rear window emergency exit ●	Sprocket and support wheel ●
Insulation testing ●	Wiper with cleaner (silent) ●	Reinforced chain rail ●
Intelligent fault diagnosis ●	Hover seat with adjustable armrests and adjustable reclining ●	600mm three-rib track plate ●
Standard charging interface ●	AM-FM radio with digital clock (complimentary) ●	Bottom cover plate ●
Dc charging pile ○	Footrest, floor mat ●	
	Speaker, rearview mirror ●	
	Safety belt, fire extinguisher (complimentary) ●	
	Drinking cup holder, car light ●	
	Escape hammer ●	
	Storage bins, sundries bags ●	
	Pilot control cut-out lever ●	
	Fully automatic air conditioner ●	
	Sun shade ●	
	One click to start the machine ●	
	10 "smart touch screen ●	
	Bluetooth ●	
	Multifunction panel ●	
	Front guard net ○	

● According to the standard ○ Said matching

# Standard configuration

Hydraulic system	Front-end working device	Upper revolving platform
Working mode selection switch ●	Flange pin ●	Hydraulic oil level gauge ●
Control valve with main relief valve ●	Welded bucket ●	Rotary parking brake ●
Control valve with spare oil port ●	Welded connecting rod ●	Rear view mirror (right) ●
Oil suction filter ●	Integrated lubrication system ●	
Return filter ●	All bucket pins are equipped with dust-proof seals ●	
Pilot filter ●	Reinforced all welded box boom ●	
	Reinforced all welded box bucket rod ●	

Air conditioning system
Heating and cooling (imported high-grade) ●
Integrated air conditioning control panel ●
Fresh air intake system ●

other
Standard battery ●
Lockable top cover ●
Non-slip stickers, handrails and sidewalks ●
Walking direction marker on the walking frame ●
Hand grease gun ●

● According to the standard ○ Said matching

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