

SANY®

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SANY HEAVY MACHINERY |     www.sanyglobal.com

SANY®

QUALITY CHANGES THE WORLD



Engine power
810 kW/1800 rpm

Bucket capacity
12 m³

Operating weight
225000 kg

SY2000H

Mining Excavator

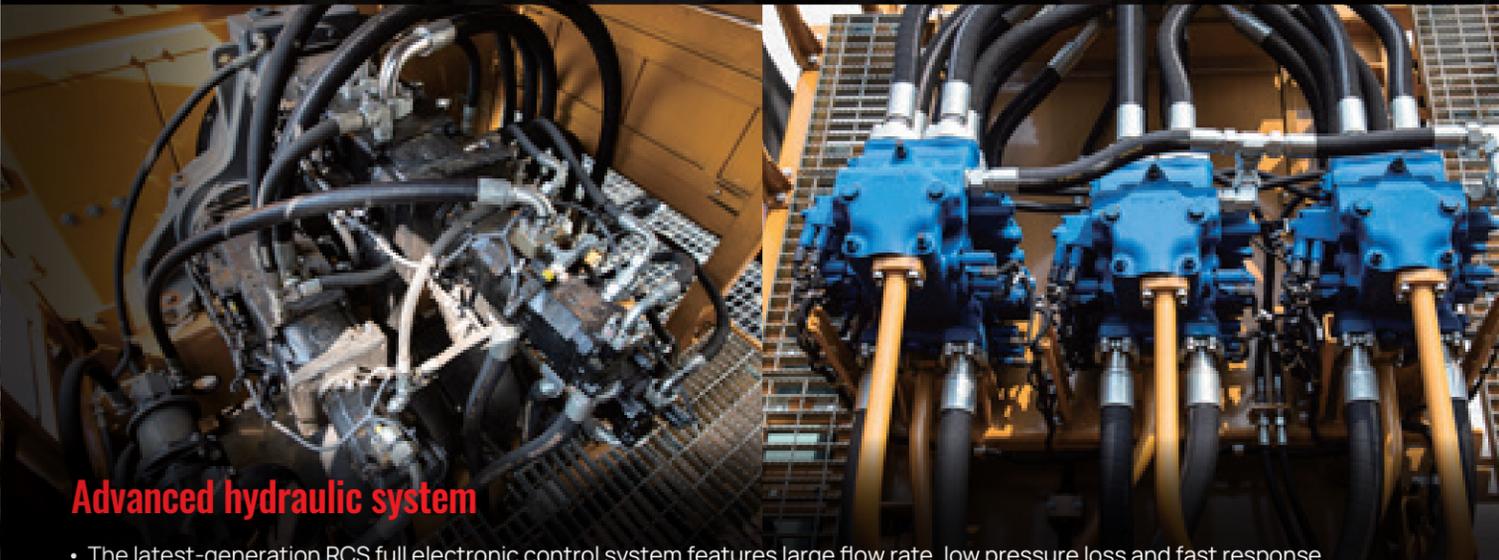
HIGHLIGHTS



STRONG POWER

Engine

- High-horsepower engine with ample power reserve for easy adaptation to harsh mining conditions.
- MCRS fuel system with ultra-high pressure injection enables more complete combustion and delivers surging power output.
- Automatic idling during operation standby enhances fuel economy.



Advanced hydraulic system

- The latest-generation RCS full electronic control system features large flow rate, low pressure loss and fast response.
- Multi-pump and multi-valve complex control delivers high productivity and low fuel consumption.
- The electronically controlled joystick achieves seamless interaction between the operator and the machine, ensuring more comfortable operation and maximized productivity.

HIGHLIGHTS

INTELLIGENT
COMFORT

A large cab specifically designed for mining applications features pressurized and improved airtightness to prevent dust ingress, delivering a comfortable operating environment even under extreme climates and prolonged operation. The expansive front windshield, side windows and large-area floor windows provide the operator with an unobstructed field of view.



- **Suspension Seat** Air suspension shock absorption, large-stroke pneumatic lumbar support adjustment, multi-directional headrest adjustment, fatigue-free even for prolonged sitting, with heating function.
- **10.4-inch Display Screen** Multiple language options available, supporting mobile phone connection, Bluetooth calls, music playback, as well as fault monitoring and alarm functions.
- **Electronically Controlled Joystick** High precision and fast response easy to operate with a natural arm and wrist posture.
- **Full-size Sunshade** Smooth retraction and deployment, shielding the operator from glare and creating a comfortable operating environment without obstructing the field of view.
- **High-power Heating and Cooling Air Conditioner** Dual heating and cooling modules with ultra-high power, equipped with a pressurized fresh air system to maintain the cab in an optimal comfort zone.
- **Reading Lamp** Long-strip reading lamp with uniform light distribution, avoiding local over-brightness for more comfortable eye experience.
- **Meeting Diversified Customer Needs** Cab refrigerator with cooling and insulation functions, suitable for both winter and summer use.

DURABLE AND RELIABLE

01 Independent Cooling of Hydraulic Oil

- An independent hydraulic oil cooling system separate from the main system keeps the oil temperature within the optimal range at all times, ensuring operators can carry out continuous and efficient construction work.
- The advanced hydraulic system design minimizes energy loss, maintains moderate oil temperature, and extends the service life of components.

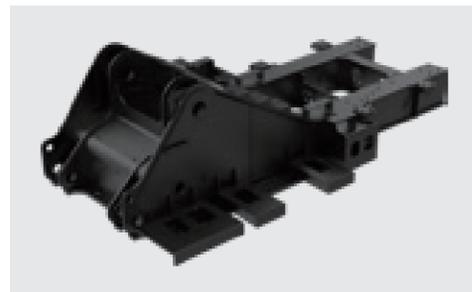
02 Three-row Roller Slewing Bearing

- The slewing gear ring adopts large-diameter rolling bearings in three directions, enabling it to withstand heavy-duty excavation and loading operations.
- Automatic lubrication ensures that the internal rollers are always in a good lubrication state for long-term service.



03 Reinforced Structural Component Design and Manufacturing Processes

- The frame and platform adopt a reinforced frame structure, which improves bending and torsion performance, withstands heavy-duty operations, and ensures long-lasting durability.
- Computer-aided analysis is applied to the design of structural components.
- The boom and dipper arm adopt a large-section box-type design, and the key parts use an integral casting structure, which greatly reduces welding stress concentration and defects. Through stress analysis and fatigue life testing, sufficient strength is guaranteed to meet the requirements of harsh mining conditions.
- The integral annealing process after welding reduces the stress level by 70-85% and significantly extends the service life.



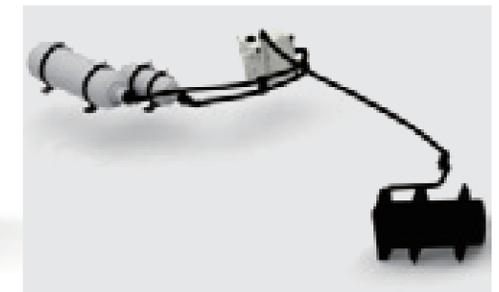
04 High Efficiency & Energy Saving

High-precision filtration system ensures maximum cleanliness of the hydraulic system.



05 Track Tensioning

The track is tensioned and damped hydraulically, and the large-capacity accumulator can absorb the impact during the undercarriage travel, effectively extending the service life of the track.



06 Reinforced Undercarriage

- Reinforced track rollers
- Self-lubricating wheel system, eliminating the need for oil-injection maintenance, with high reliability and long service life
- Integrally forged track shoes





SAFETY FACILITY



TCO

Total Cost of Ownership (TCO) The design objective is to minimize the customer's life-cycle costs as much as possible, covering all aspects such as the service life of the complete machine, operation, maintenance, transportation and repairs.

Performance & Productivity

Optimal Compatibility and Versatility with Mining Trucks

- Multiple Bucket Capacities Available

Low operating cycle time

- Adequate engine power reserve
- The fully electrically controlled hydraulic system integrates Sany's self-developed pump-controlled energy-saving technology, achieving optimal matching between the engine and the pump for faster, more precise, and more cost-effective operation.
- The powerful digging force can meet the requirements of various harsh working conditions.
- Optimized hinge point design ensures a wider working range and better compatibility with trucks.
- It delivers high productivity and low fuel consumption for customers.

Comfortable driving and riding experience No fatigue even during 12-hour shifts

- The seat provides the operator with a comfortable sitting posture.
- Ergonomically designed concept.
- Excellent visibility.
- Dual - air conditioning system.
- Low noise level.

Quality & Reliability

Matched service life of the machine and components helps maximize the return on investment (ROI).

- Advanced structural component design philosophy and manufacturing processes
- Reliable component service life is based on the adoption of high-quality parts proven in mining applications

- Enhanced power matching of the hydraulic system (reducing engine speed drop caused by torque and speed control)
- During operation standby, the engine speed can be automatically reduced to low-idle mode
- The independent hydraulic oil cooling system maintains oil temperature at an optimal level
- The fuel and hydraulic systems are equipped with high-precision filters to ensure superior oil cleanliness
- Control system (advanced diagnostics, operation trends, maintenance reminders)
- Lubrication system with self-fault detection function
- Reduced lubrication points (fixed pins)

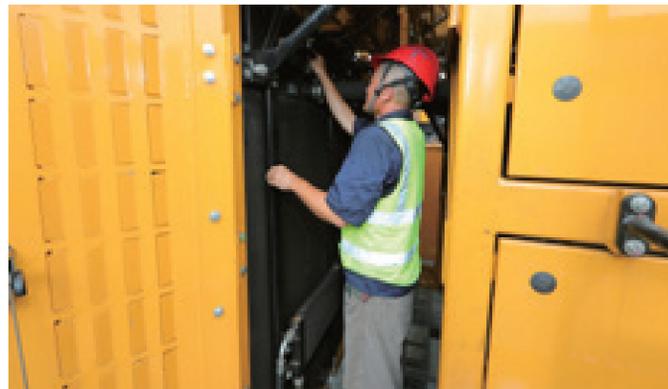
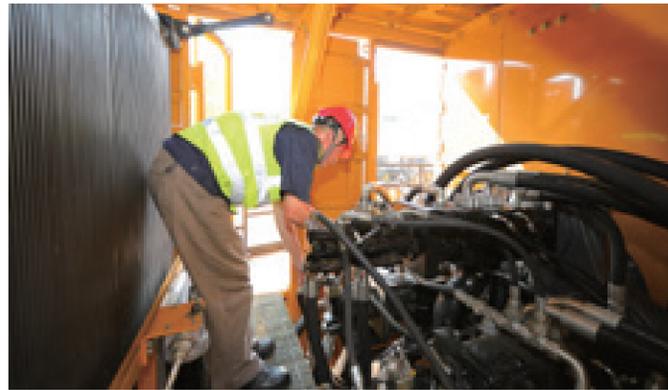
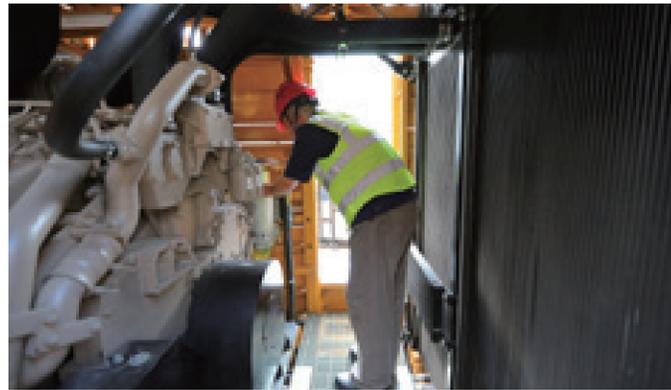
O&M Costs

Operation and maintenance costs have been a consistent focus throughout the entire design process.

- Reduced Hydraulic System Losses for Enhanced Fuel Efficiency
- High-Efficiency Fuel Engine
- Spacious Maintenance Access Channels
- Excellent Component Maintenance Convenience
- Main Valve Mounted on Boom, Greatly Boosting Swing System Maintainability
- Ground Centralized Filling System (Oil Filling/Draining)
- Extended Maintenance Intervals (Component Maintenance, Replacement & Overhaul Intervals)
- Strong Component Versatility
- Automatic Lubrication System
- Fuel System Capable of 24-Hour Continuous Operation
- Modular Design Enables Rapid Assembly & Disassembly
- Plug-and-Play Power Module Significantly Reduces MTTR (Mean Time to Repair)
- Hammerless Bucket Tooth System for Quick & Easy Replacement

MAINTAINABILITY

- Internal access passages are incorporated into both the engine compartment and pump room, ensuring easy access to all components.
- Streamlines daily inspection, maintenance and parts replacement.
- Inspection lamps mounted above passages boost operational safety.



Engine fault indication

- Engine status can be judged by the color of the indicator lamp for quick troubleshooting.



Automatic lubrication system

- Full-time automatic lubrication system with a large capacity of 200L features an extended service cycle and reduces labor costs associated with lubrication.



Double isolating switch

- The power supply to the starter motor can be cut off independently while still providing power to the complete machine, facilitating troubleshooting and improving safety and maintainability.



Illuminate all areas of the complete machine

- Good lighting facilitates quick troubleshooting and maintenance during late-night operations.

TECHNICAL SPECIFICATION

SPECIFICATION	UNIT	VALUE
Operating weight	kg	225000
Bucket capacity	m ³	12
Engine	-	China Nonroad Stage III emissions standards
Model	-	QSK38
Type	-	V-type, 12-cylinder
Engine power	kW/rpm	810/1800
Maximum torque	N·m/rpm	4869/1350
Displacement	L	37.7

HYDRAULIC SYSTEM	UNIT	VALUE
Type	-	Full electrically controlled
Main pump	-	6 piston pumps
Maximum flow rate	L/min	810/1800
Maximum pressure	Mpa	32.5

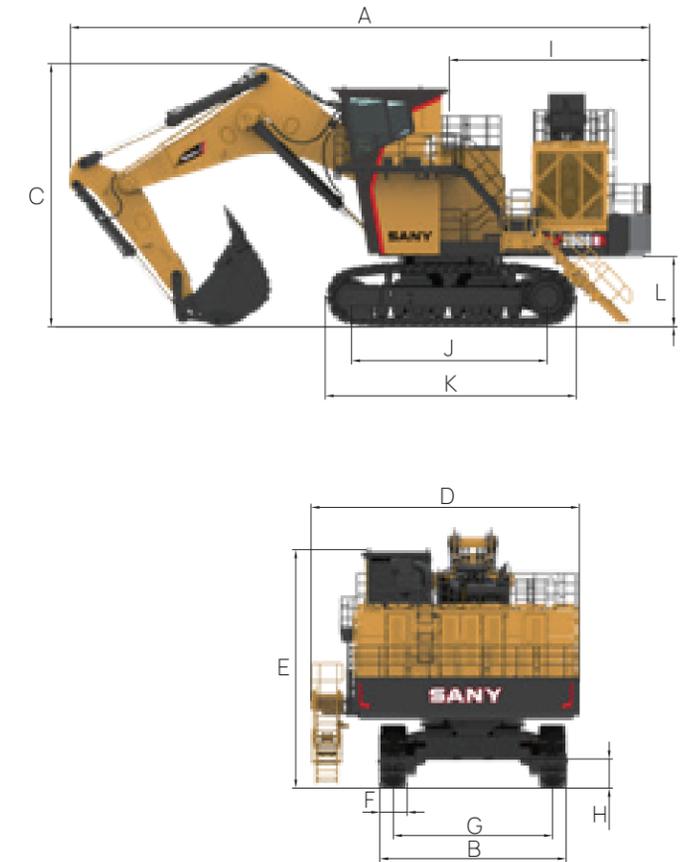
SERVICE REFILL CAPACITIES	UNIT	VALUE
Fuel tank	L	4000
Hydraulic tank	L	4200
Engine oil	L	114
Antifreeze fluid	L	330
Travel reducer gear oil	L	2 × 38
Swing reducer gear oil	L	2 × 34
Transfer case gear oil	L	26
Automatic lubrication	L	200

SPECIFICATION	UNIT	VALUE
Swing speed	rpm	5
Travel speeds	km/h	2.7/1.0
Grade ability	°	30
Ground pressure	kPa	214
Bucket digging force	kN	745
Arm crowd force	kN	687

UNDERCARRIAGE	UNIT	VALUE
Number of track shoes (per side)	mm	49
Carrier roller (per side)	-	3
Track roller (per side)	-	8
Track shoe width	mm	810

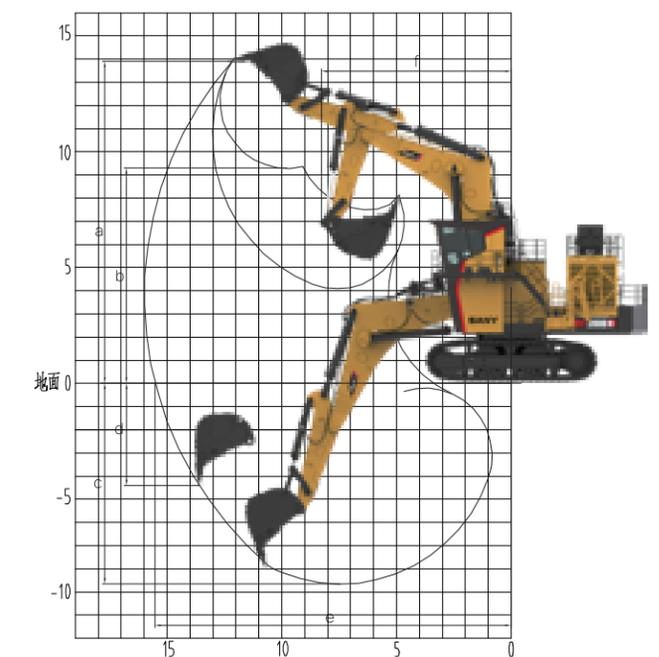
DIMENSIONS

	UNIT	VALUE
A. Overall length	mm	17120
B. Lower width	mm	5510
C. Total height	mm	7530
D. Upper width	mm	7930
E. Total height [top of cab]	mm	6985
F. Standard Track Pads	mm	810
G. Gauge	mm	4700
H. Min. ground clearance	mm	855
I. Tail swing radius	mm	5920
J. Wheel track	mm	5780
K. Track length	mm	7420
L. Ground Clearance of counterweight	mm	2055



WORKING RANGE

	UNIT	VALUE
Boom Length	mm	8750
Arm Length	mm	3900
a. Max.digging height	mm	13900
b. Max.dumping height	mm	9300
c. Max.digging depth	mm	8700
d. Max.vertical wall digging depth	mm	4400
e. Max.digging reach	mm	15500
f. Min.swing radius	mm	8300



STANDARD EQUIPMENT

ENGINE SYSTEM

810kW high-power engine, meets china nonrod Stage III emission standard	●
Alternator 24V / 175A	●
Air filters designed for extremely harsh working conditions	●
Nanoscale fuel filter	●

HYDRAULIC SYSTEM

Six variable displacement axial piston pumps	●
Each pump is independently equipped with a high-pressure filter	●
Return oil filtration system	●
Pilot filtration system	●
Independent hydraulic oil cooling system	●

CABIN

FOPS cab	●
Pressurization system	●
Multi-speed adjustable heating, ventilation and air conditioning (HVAC) system	●
Pneumatic suspension and heated driver's seat	●
It is equipped with an integrated position-adjustable handrail and operating lever	●
A refrigerator with both cooling and heating functions	●
Equipped with a front windshield, lockable doors and emergency escape Windows	●
Wiper with washing function	●
Cup holder, 12/24V power socket, large-space storage cabinet	●
Reserved interfaces for seat belts and seat belt indicators	●
Sany intelligent surround view early warning system	●
Adjustable sun visor	●
Coach's seat	●
Auxiliary bottom window	●

ELECTRICAL SYSTEM

Battery 6×12V (660Ah system capacity)	●
Battery switch and start switch	●
Circuit breaker protector and fuse	●
Electronic horn, walking alarm and alarm light	●
Lighting switch panel	●
Bluetooth function, radio function	●
Five emergency stop buttons	●
LED work light-LED maintenance light-LED escalator light	●

UNDERCARRIAGE

810mm track plate	●
2x 8 track roller	●
2x 3 idler wheels	●
A track tensioning system with accumulators and pressure reduction functions	●
Reinforced idler wheels	●
2×2 track guard plate	●

OTHERS

Centralized filling system	●
Automatic lubrication system	●
45° fully automatic boarding ladder	●
45° cab entrance aisle	●
Anti-slip walkway	●
Remote data access system (evi)	●

OPTIONAL EQUIPMENT

For detailed information, please contact the sany agent

14m ³ bucket	○
Chisel-shaped bucket teeth	○
Pick-shaped bucket teeth	○

Engine preheating system	○
Automatic fire extinguishing system	○
Cab sliding window	○

● Standard configuration ○ Optional configuration

ENGINEERING AND MANUFACTURING

Complete research & development and test system

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

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



SANY OVERSEAS SERVICE

GLOBAL SUPPORT ANYTIME ANYWHERE NO MORE WAITING

900+



Overseas service centers

3500+



Professional technical service engineers

365×24



Support

Service Center

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