



# SY60C

**Gross power**  
42.4kW/2000rpm

**Bucket capacity**  
\*0.22m<sup>3</sup>

**Operating weight**  
6000kg

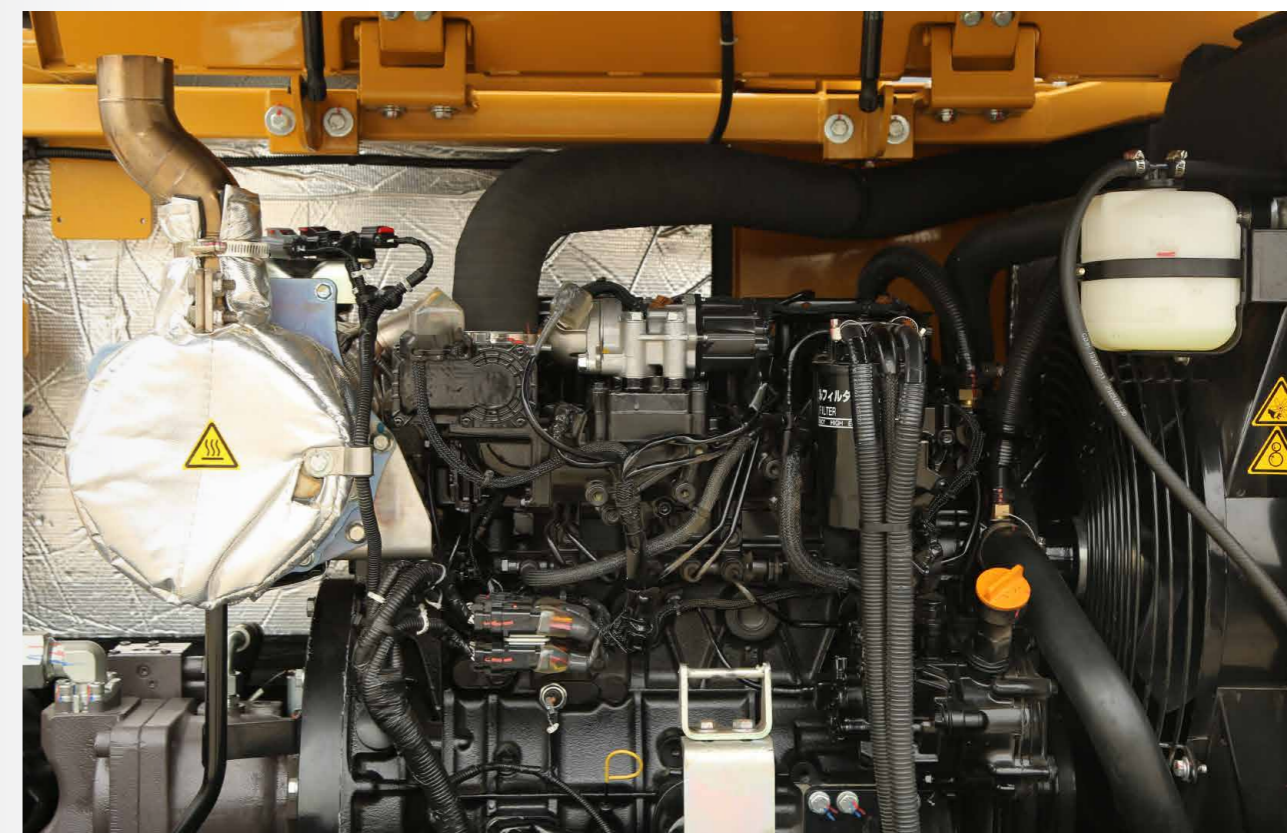


\* Bucket is optional



**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 dealers. For more details, please visit the local authorized dealer of SANY Heavy Machinery Ltd.



## More powerful

Advantages of Yanmar engines: Energy-saving environmental-friendly engines exclusively for SANY are widely used and well recognized by the customers. It is sturdy, durable and fuel-saving, is fitted with low-cost spare parts and is convenient for maintenance.



Hengli main pump HP3V80/AV10RC2S3M has pressure cut-off functions to reduce the over flow loss, and the maximum flow of the hydraulic system can reach 148L/min.



Equipped with Hengli main valve HVSE-12-10-PLL300-BE178, safe and reliable, the excellent performance.

# Structural parts specifically designed for mine applications

## .01

### Bucket

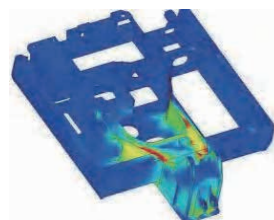
The reinforced bucket for rocks is fitted with wear-resisting steel plate at the bottom so that the strength of bucket is improved. With secondary arc shape of optimized design, the digging resistance and the wear of sand and soil against the bucket body is reduced during digging so that it is more energy-saving and is durable.



## .02

### Structural analysis

Through professional CAE analysis to optimize the structure and reduce stress concentration: consequently means service life of working device is extended by 30%.



## .03

### Boom

Rear support and center support of the boom adopt forgings for avoiding concentrated local welding stress and improving the durability. Key positions are enveloped with fortified steel plate for severe working conditions.



## .04

### Arm

Rear support is made of forgings for avoiding concentrated local welding stress and improving the reliability. With wear-resisting plate on front end, the service life of bucket rod is extended.



## .05

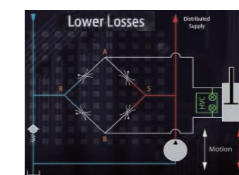
### Platform

High-strength slewing platform. D-shaped large-section side beams are more secure, can survive higher external impact and improve the decorous feeling of complete machine.

## .06

### Undercarriage

Complete hydraulic buffer system minimizes the internal impact of hydraulic system. With performance test of 30,000 times and market verification of 50,000 units, the operating stability of complete machine is improved and product life is extended significantly.





## Comfortable driving

With high-grade trim parts, wide view, suspended seat, excellent vibration damping and noise reduction performance, the driving experience will be more comfortable.

high-end interior, wide view, mechanically suspended seats, fully automatic heating and cooling air conditioning, etc.

Cigar lighter, cup holder and reading lamp all are complete .



# Environment protection standard in world front

## Recoverable



**SY60C All-metal covering parts are used**

All-metal covering part is used, is recoverable and environmental-friendly; the materials liable to pollution like glass fiber reinforced plastics are not used.

# High Reliability

## Top-ranking core configuration

- Yanmar engine meeting emission standard EC Stage V exclusively for SANY could ensure the operating reliability of the machine under severe conditions.
- Hengli main pump, Hengli main valve and hydraulic components from world famous brands ensure high reliability of hydraulic system.
- Reinforced structural members with brand-new design have longer service life.
- The total weight is much larger than that of other companies and the stability is higher.



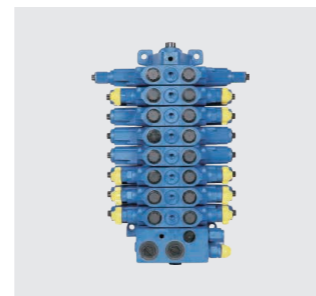
Hydraulic pump



Traveling motor



Slewing motor



Multitandem valve



# More powerful energy

## Power system

- Ultra-light power engine exclusively for SANY: Power margin is sufficient, and service life is extended by over 10%.
- New-type parallel radiator: Coolant temperature is 3-5°C lower than the competitor and hydraulic oil temperature is 7-10°C lower than the competitor.
- External-mounting fuel filter: It has high capacity and strong assimilative capacity, and is equipped with ultra-large capacity dual oil-water separator.
- Air prefilter + dual air filter element could ensure sufficient and clean air and reduce the wear of cylinder components.



Standard configuration prefilter



Dual air filter element



External-mounting fuel filter



Ultra-large parallel radiator



## Complete research development and test system

Complete research, development and test system is the strong backup for excellent performance.

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

Advanced manufacturing technology is a reliable guarantee for producing excellent products.

SANY has an RGV assembling line and fullautomatic 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.



# Safety configuration

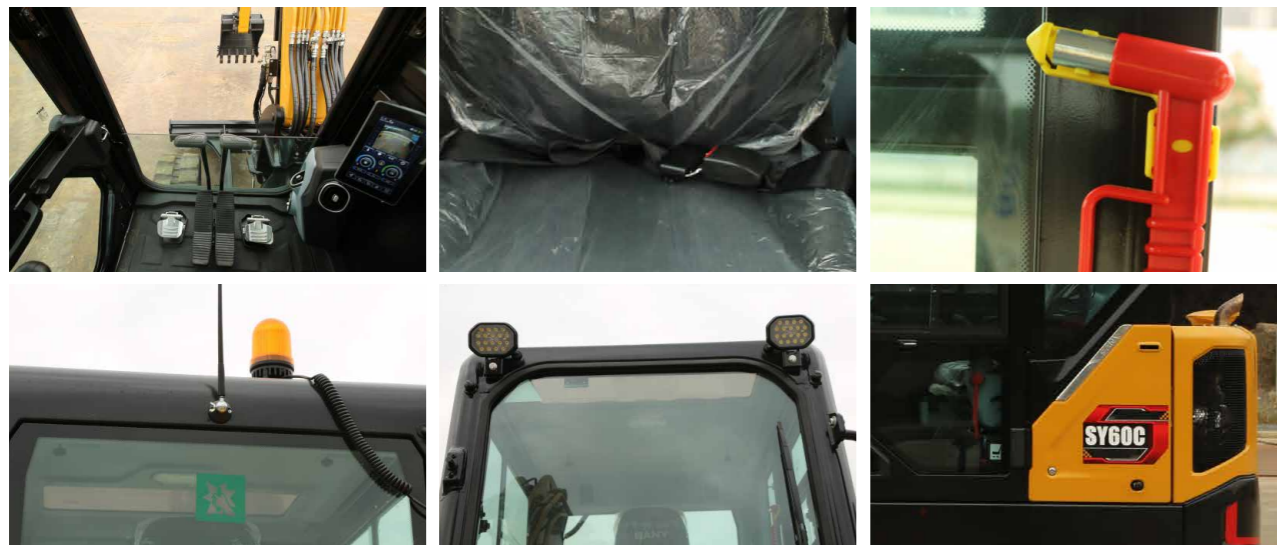
## Safety configuration of national standard

Meet safety standard of many regions including China, EU and North America etc. SY60C cab adopts ROPS and FOPS structural design and is certified with ROPS and FOPS.



## Safety facility

- Wide view.
- Fire extinguisher,
- escape hammer/break-in area and seat belt.
- Dual front headlamps.
- Compressor belt shield.



# Convenient maintenance

- Large-area covering part is used. After it is opened, daily maintenance can be carried out on the ground; thus the maintenance is convenient and the accessibility is good.
- Air filter, fuel oil coarse filter, fuel oil fine filter, engine oil filter and pilot filter element are within easy reach and can be maintained very conveniently.
- The beautiful and elegant grease bucket holder may be used to carry the grease bucket easily.
- Large-size tool kit may contain maintenance tools conveniently.
- Detachable radiator dust screen is convenient to be washed.



# Parts warehouse & service network

- Parts Warehouse: **500** parts warehouses
- 🚚 Service Network: **600** service networks and **4,000** service engineers



# Technical Specifications

Specification			
Operating weight	6000kg	Travel Pressure (maximum)	27 MPa
Ground Pressure	34.6kPa	Travel Speeds (maximum)	2.2/4.0 km/h
Engine	Yanmar 4TNV98C-WSY	Travel Effort (maximum)	50 kN
Displacement	3.3L	Swing Motor	Axial Piston with Swing Brake
Gross Power(SAE J1995)	42.4kW/2000rpm	Swing Pressure (maximum)	19.1 MPa
Hydraulics	Load Sensing with Pilot Control	Swing Speed (maximum)	9.6 RPM
Main Hydraulic Pump	Axial Piston - Variable Displacement	Undercarriage (standard)	Belted Rubber Track
Operating Flow (maximum)	148L/min	Track Shoe width (standard)	400 mm
Operating Pressure (maximum)	27MPa	Track Rollers (per side)	5
Travel Motor	Axial Piston with Park Brake	Carrier Rollers (per side)	1

SERVICE REFILL CAPACITIES	
Fuel Tank Capacity	125L
Hydraulic Tank Capacity	105L
Engine Oil Capacity	9.6L
Cooling System Capacity	10.4 L



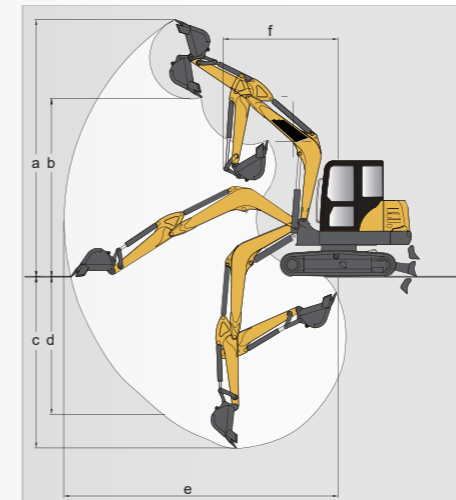
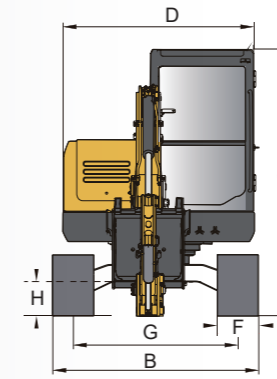
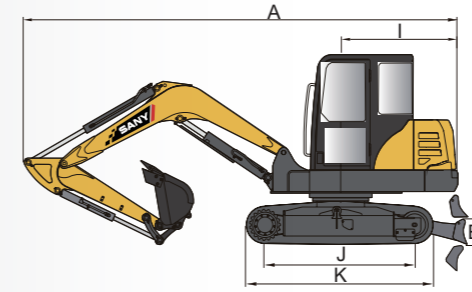
# Lifting capacity table

Blade down										
Load Radius	2.0 m		3.0 m		4.0 m		5.0 m		MAX REACH	
Load Point Height										
4.0 m					1000 kg*	1000 kg			1000 kg*	850 kg
3.0 m					1150 kg*	1000 kg	1100 kg*	650 kg	1150 kg*	650 kg
2.0 m			1800 kg*	1400 kg	1350 kg*	950 kg	1200 kg*	950 kg	1200 kg*	600 kg
1.0 m			2450 kg*	1250 kg	1650 kg*	850 kg	1350 kg*	850 kg	1250 kg*	550 kg
0 m			2800 kg*	1200 kg	1850 kg*	800 kg	1400 kg*	800 kg	1350 kg*	600 kg
-1.0 m	3800 kg*	2400 kg	2750 kg*	1200 kg	1850 kg*	800 kg	1400 kg*	800 kg	1450 kg*	650 kg
-2.0 m	4000 kg*	2350 kg	2450 kg*	1200 kg	1550 kg*	850 kg			1550 kg*	850 kg

Blade up										
Load Radius	2.0 m		3.0 m		4.0 m		5.0 m		MAX REACH	
Load Point Height										
4.0 m					1000 kg*	1000 kg			1000 kg*	850 kg
3.0 m					1000 kg*	1000 kg	900 kg*	650 kg	900 kg*	650 kg
2.0 m			1800 kg*	1400 kg	1300 kg*	950 kg	900 kg*	650 kg	800 kg*	600 kg
1.0 m			1800 kg*	1250 kg	1200 kg*	850 kg	900 kg*	650 kg	800 kg*	550 kg
0 m			1750 kg*	1200 kg	1150 kg*	800 kg	850 kg*	600 kg	800 kg*	600 kg
-1.0 m	3600 kg*	2400 kg	1750 kg*	1200 kg	1150 kg*	800 kg	850 kg*	600 kg	900 kg*	650 kg
-2.0 m	3700 kg*	2350 kg	1800 kg*	1200 kg	1200 kg*	850 kg			1200 kg*	850 kg

\* Indicates load limited by hydraulic lifting capacity

# Machine dimensions



Overall dimensions (mm)	SY60C
A. Transport Length	6000
B. Transport Width	2000
C. Transport Height	2583
D. Upper Structure Width	1875
E. Blade Height	385
F. Track Width (standard shoe)	400
G. Track Gauge	1600
H. Ground Clearance (minimum)	330
I. Tail Swing Radius	1560
J. Track Length on Ground	2045
K. Track Length	2545

Operating range (mm)	SY60C
a. Maximum Digging Height	5747
b. Maximum Dumping Height	4020
c. Maximum Digging Depth	3990
d. Maximum Vertical Wall Digging Depth	3200
e. Maximum Reach at Ground Level	6280
f. Minimum Swing Radius	2640

# Standard configuration

Engine	Cab	Traveling body of undercarriage
12V/3kW starter motor •	Ultra-silence frame cab •	Traveling parking brake •
80A alternator •	Reinforced light-color glass window •	Traveling motor guard plate •
Air prefilter •	Silicone oil rubber damper •	Grease filler cover plate on traveling beam •
Dry-type dual-element air filter •	Openable front wall upper window and left side window •	Hydraulic tensioning device of track •
Cylinder engine oil filter •	Rear window emergency fire exit •	Bolted driving wheel •
Three-stage fuel oil filter •	Wiper (with washer) •	Carrier roller and thrust wheel •
Engine oil cooler •	Multidirectional adjustable seat •	Reinforced chain track with pin shaft seal •
Radiator •	Radio (with digital clock) •	400mm triple bulging track shoes •
Auxiliary radiator water tank •	Foot rest and floor mat •	Reinforced side pedal •
Fan deflector •	Loudspeaker and rearview mirror •	Bottom cover plate •
Isolated mounted engine •	Seatbelt and fire extinguisher •	
Automatic idling system •	Cupholder and compartment lamp •	
	Ash tray and emergency hammer •	
	Storage box and sundries bag •	
	Pilot control cut-off lever •	

• stands for standard configurations ○ stands for optional configurations

# Standard configuration

Hydraulic system	Front-end working device	Instruments of monitoring system
Operating mode selector switch •	Flange pin •	Global positioning system (GPS) •
Control valve with main overflow valve •	Bucket clearance adjuster •	7 touch screen •
Control valve with spare oil port •	Welded connecting rod •	EEVIA system •
Oil suction filter •	Integrated lubricating system •	Hour meter, fuel tank oil level gauge •
Oil return filter •	All bucket pins are equipped with dust proof seal rings •	Engine coolant temperature gauge •
Pilot filter •	Reinforced all-welded box-type boom •	Failure diagnosis and alarm system •
	Reinforced all-welded box-type bucket rod •	

## Air conditioning system

Air conditioner •
Air conditioner control panel •

Upper slewing platform	Alarm system	Others
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Fuel oil level sensor •	Engine oil pressure insufficient •	Standard storage battery •
Hydraulic oil level gauge •	engine coolant temperature too high •	Lockable engine hood •
Toolbox •	Insufficient fuel volume •	Lockable fuel filler cap •
Slewing parking brake •	Fault code alarm •	Boom swing function •
Rearview mirror (right) •		Traveling direction sign on traveling frame •
		400mm rubber track •
		400mm steel track ○

• stands for standard configurations ○ stands for optional configurations