



Quality Changes the World



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**SANY GROUP CO., LTD.**

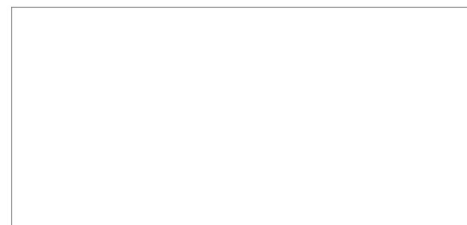
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B06S2ENAM-SY55



**SANY HYDRAULIC EXCAVATOR  
SY 55**

Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment.  
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**2013 style excavators of C9 series are now available, after thousands of experiment by more than 1000 R&D in the past 2 years. C9 series excavators adopt DOMCS — Dynamic Optimized Match Control System technology; the technique of engine, control system, hydraulic system and structure parts are customized for Sany; the efficiency, economy, reliability of machine are improved. All of those ensure high efficiency, longer service life, good continuous operation performance and excellent environment adaptability for sany excavators.**

#### ■ High performance

- Higher power engine in the same tonnage excavators, stronger hydraulic system.
- More powerful Digging Force in the same tonnage excavators are better work performance.
- Bigger capacity of bucket in the same tonnage excavators and faster operation speed ensure high efficiency of machine.
- Optimized Power Control
- Precise Swing Control
- Longer Joysticks

#### ■ High Economical Efficiency

- Low emission
- Auto Deceleration
- Engines conform to the states (Exhaust Emission Standard CHN interim Tier2)

#### ■ Luxurious and Comfortable Operating Experience

- DOMCS — Dynamic Optimized Match Control System, makes the operation comfortable and precise.
- Low-noise Cab
- Silicone rubber shock absorber, reduces the shock of cab
- Import air conditioner in cab
- Anti-rolling and Anti-Falling Object Protection Welded Steel Structure
- User-friendly Facilities



#### ■ High Reliability

- Work Reliability Equipment
- Special Strengthened Body
- Newly Designed lead radiator
- Robot-welding process can ensure the high reliability and high reliability of machine.

#### ■ Easy Maintenance

- Fully opened left and right rear access door for easy maintenance
- Long maintenance interval of engine oil, engine oil filter and hydraulic oil filter
- The radiator, fuel tank, hydraulic oil tank are equipped with screw plugs at the bottom for easy maintenance
- Equipped fuel prefilter core and oil-water separator



## High efficiency



### Advantage

#### High Efficiency and Low Consumption Engine

High-power Downsizing Engine, designed according to fuel quality, low fuel consumption, high reliability and low maintenance costs.

#### Environment-friendly

With the exhaust emission in line with EPA Tier 2/EU stage II Emission Standards, the engine is environmentally friendly in the new era.

#### High/Low Travel Speed Change

With advanced travel motor and optimized flow distribution system, the machine can work more efficiently by traveling at high or low speed according to ground surface condition and working condition.

#### Optimized Power Control

The engine is designed with three working modes. The working mode can be changed on the monitor according to different applications, which can maximize operating efficiency and reduce fuel consumption.

**Isuzu 4JG1-NABGB engine customized for Sany. The output power is 40.9kw/2000rpm, stronger power and high reliability, while fully guaranteeing the excavator's stability in continuous operation under severe weather conditions and satisfying customers for requirement of engine stability.**

#### Engine Control System

Intelligent controller can collect the signal of accelerator position, and then calculate the difference between setting position and actual position. Accelerator will choose forward rotation or reverse after receiving the difference signal. In this way, the controller can control the engine speed.

#### Faster Boom And Arm speed

A regeneration circuit is added to the arm and boom oil cylinder circuit. The arm and boom speed is increased as a result. The working time became shorter, with operating efficiency improved.

#### Precise Swing Control

Optimized Revolving valve core and improved interceptor performance, improved micro-move ability and minimized Swing shock. All of these aspects make the swing start and stop more precise and smooth.



#### World-leading Negative Flow Controlled Hydraulic System

Consisting of variable single pumps that provide a constant overall power, the load-sensitivity flow distribution system is of high stability and excellent microoperation performance, offering an almost perfect meticulous process. Its superior performance lies in that flow demand is determined according to the actuators and their corresponding actions. The operating accuracy is irrelevant to load. It is only related to the deflection angle of control levers. The optimization of main valve can realize the coordination of multi-movement, making different trajectories to meet the requirements of delicate operation.

#### Walk Straight Capacity

The flow demand is determined according to the actuators and their corresponding actions with highly sensitive main valve. In this way, the machine can provide good walk straight performance coordinated of multi-movement.

#### Low Fuel Consumption Auto Deceleration System

When an operation has been stopped for 5 seconds, the engine speed drops automatically to idle level and maintains the idling state, thus reducing the fuel consumption. The engine speed will increase to the set rpm by maneuvering the control levers, thus maintaining work efficiency.

#### Coordination

Excellent cooperation performance, soft operation, more convenience, all of these offering high work efficiency and good smooth ground ability.

#### Powerful Digging Force

Bucket digging force is 45kN, and arm digging force is 33kN, the highest level in the same tonnage excavator.

#### Large-capacity Bucket

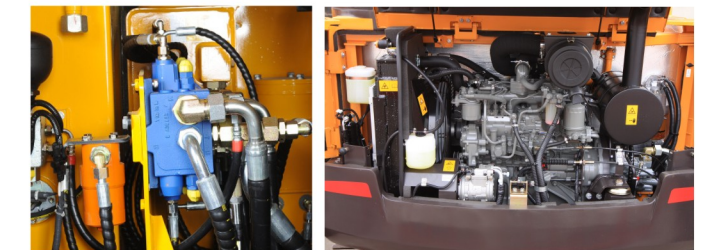
The standard bucket has a capacity of 0.28m<sup>3</sup>, which has been redesigned to reduce cutting resistance and enhance bucket strength. There are also many optional buckets available.

#### Excellent Near-body Performance

Bucket tips can be very close to the dozer blade, allowing the machine to work efficiently within a wider working range.

#### DOMCS — Dynamic Optimized Match Control System

Unique Dynamic Optimized Match Control System realizes the perfect matching between engine and pump and improves work efficiency. Engine life is extended during this process.



#### The Electric Control Module to Achieve the Best Engine Efficiency

The Electric Control Module allows quicker response to the change of operating variables in order to achieve optimum engine performance. It is fully integrated with sensors of fuel, engine oil, air intake, coolant and exhaust systems to conduct the real-time monitoring and auto adjustment on the system conditions, which can ensure the engine won't overload when the excavator works with full load.

#### Innovative Dozer Blade

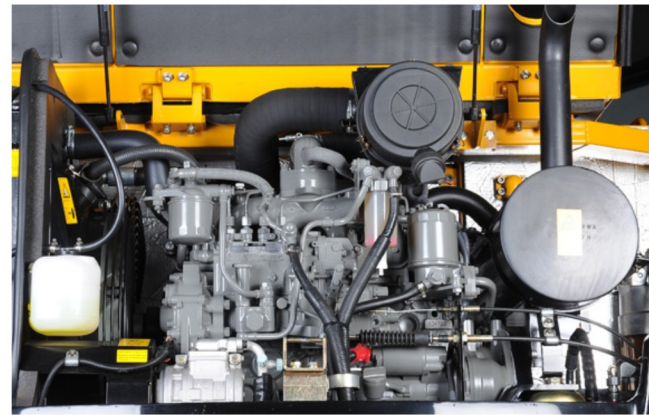
Equipped with an innovative dozer blade that has an increased magnitude of moving up and down, this machine is very suitable for complex operating conditions, such as road construction, and burying pipelines or cables. The dozer blade has a special shape and a wider plate that prevent soil from falling behind, which considerably improves the operating efficiency of excavating, landfill and leveling.





High Economical Efficiency

Easy Monitoring and Maintenance



**High economy**

The engine customized for Sany is able to precisely control the engine fuel injection angle and injection time in order to ensure full combustion of fuel.

**Working Mode Selection**

there are three optimized working modes:  
 G Mode Standard mode: 90% of the rated power reduces fuel consumption and noise.

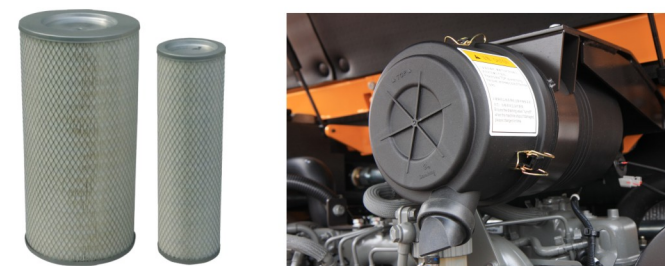
S Mode (Light duty mode) : 80% of the rated power ensures fuel economy.

B Mode (Break mode) : 90% of the rated power reduces fuel consumption

The working mode can be easily changed by operator, to meet the customer requirement of economy and efficiency.

**Three-level Air Filter**

Primary and dual air filters realize 99% of filtration rate. It improves the air quality in engine, reduces the early wear of injection pump and nozzle and extends the service life of engine. Such a design is especially useful for harsh working environment that is windy or dusty. It also extend smachine service life and maintenance intervals, reduces downtime, and improves economy.



**Low Noise, Minimum Shock**

The perfect match between engine and muffler reduces the noise produced by exhaust emission. Arc wind guide cover reduces the turbulence and noise. The adoption of noise insulation material and improved damping system offers better stability, noise reduction and operator comfort.

**Dynamic Control**

Innovative electrical-hydraulic control improves operating efficiency and reduces fuel consumption via real-time power match between engine and hydraulic pump.

**Auto deceleration system**

The function of auto deceleration or acceleration reduces fuel consumption by 5-10%. When an operation has been stopped for 5 seconds, the engine speed drops automatically to idle level and maintains the idling state, thus reducing the void flows in the hydraulic system, wear of diesel engine, energy consumption and noise. When the operation is resumed by maneuvering the control levers, the engine speed will increase to the set rpm within 0.1 second. The working capability is resumed instantly. The auto idle switch is always active when the excavator is activated each time.

**Throttle Motor**

with stepper motor, increases tensile force and reliability. Such a design is especially adoptable for harsh working environment.

**Large Color Monitor**

Large color monitor can ensure safe, precise and stable operation. In case of any abnormality of engine or hydraulic pump, failure information will be displayed on the monitor timely. Operator can easily know the state of machine through monitor, which used high light, wide visual angle and industrial color.

**Maintenance function**

When the engine oil and filter should be change, the information will be displayed on the monitor timely.

**Failure memory function**

Failure history is saved in the monitor for effective troubleshooting diagnosis.

**Equipment Management and Maintenance System**

In case any abnormality of oil amount, water temperature, hydraulic pressure, etc. should occur, failure information will be displayed on the monitor timely.



**Menu Display**

- 1 Throttle gear
- 2 Engine coolant temp
- 3 Fuel level gauge
- 4 Working hours
- 5 System clock
- 6 Function menu
- 7 Working mode

**Indicator Function Keys**

- 1 Function keys
- 2 Operation buttons





**Luxurious and Comfortable Operating Experience**



**Innovated Large Cab**

Larger windows of the newly-designed spacious cab provide you a wider view. The operator can clearly see the work equipment condition and the surrounding through the front, side and back windows. The upper window of the cab can be moved to the top of the cab when the front window is unlocked. The roof hatch is openable, through which the cab can have better ventilation and more light. It is also helpful for the operator to talk with others outside the cab. The control levers and joysticks designed and arranged according to human engineering are all within the reach of operator. They can be operated easily with little efforts.

**Well-sealed Cab, Clean and Quiet**

Equipped with excellent sealingring, the cab is free from dust and rain. And the low-noise design and indoor noise under 74 decibels can effectively relieve the fatigue of operator.

**Silicone Rubber Shock Absorber**

Innovated silicone rubber shock absorber is fixed to the swing platform in six points, minimizing the shock brought by rough road and engine or hydraulic impact, considerably increasing the stability of cab, and improving the comfort of operator.



**Intelligence Private Controller**

Intelligence private controller can monitor your machine timely. In case any abnormality of oil amount, engine oil press, water temperature, air filter, hydraulic pressure, etc. should occur, failure information will be displayed on the monitor timely. Operator can easily read the informations through high light, wide visual angle industrial color monitor.

**Import Air Conditioner**

The standard large-capacity air conditioner keeps in-cab air fresh by purifying fresh air and recirculation air. The quick temperature control ensures a comfortable temperature in cab all the year round.

**Longer Control Joysticks**

The control levers and joysticks designed and arranged according to ergonomics, can be operated easily. Each operation button is within the reach of operator.



**Use-friendly Facilities**

Thoughtful arrangement of built-in warm/cool storage box, cup holder, literature bag and ashtray.



**Air-conditioner with Multiple Air Outlets at Different Levels and Locations**

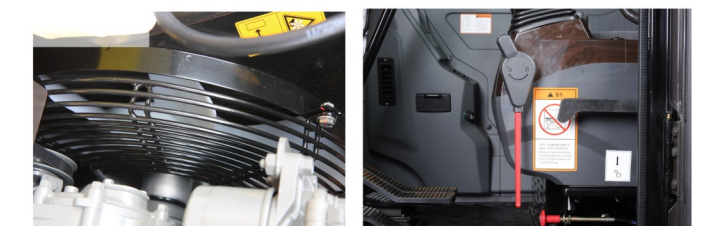
There are several air outlets – the front window defrost outlet ensuring operator's visibility, and the outlets for operator face, back and feet – which can be turned on/off as desired. By changing the direction of air stream, the operator can fully enjoy the benefit of air conditioner.

**Anti-Falling Object Protection Welded Steel Structure**

The cab is punch-formed with thick high-strength steel sheet, in addition to toughened glass windows and seat belt. Safety of operator is best ensured in the cab.

**Fan Guard**

The radiator fan is enclosed with a protective net cover that can prevent objects from falling into the fan to damage its blades.



**Hydraulic Leading Lock**

The joysticks can't control the machine when hydraulic leading lock is on. It prevents accidents by unconscious operation.

**Other Safeguard**

- ◇ Escape Window
- ◇ Escape Hammer
- ◇ Fire extinguisher
- ◇ seat belt





## High reliability



### Auto Robot-welding Process

Robot-welding process can ensure accurate, strong and durable structure.

### Antiswing Valve and Time Delay Valve

With antiswing valve and time delay valve, Slewing Group keep the excavator slew more reliability and steadily. Slewing brake system make the slew brake more safely.

### New Big Innovative Parallel radiator

New parallel radiators with the specially designed internal structure are easy to flush. The excellent heat dissipating performance of radiator ensures the running of engine for a long period of time.

### New Process

Restraint welding and reverse deformation process can ensure accurate, strong and durable structure.

The strength of SY55C-9 boom, arm, bucket are improved, and the side plates are thicker than before. The ear plates have been redesigned according to the highly challenging requirement of reduce stress at the bending. The boom has passed the fatigue test and field digging test (soil and rock mixture).

### Bucket

The shape of bucket has been redesigned. Using quality anti-wear plates with a thickness up by 33 percent as bucket bottom, the durability of bucket is greatly extended. No damage to the bucket is found during field digging test (soil and rock mixture).

### Stability

Wider track, longer undercarriages and balance redesigned improve the stability of excavator.

**Long experience, smart design and excellent manufacturing system ensures high reliability of machine.**

### High-strength Machine Body

High strength of Reinforced X- frame modeled and box structure beam have good passability, torsional and anti-bending capacity.

### High-strength Swing Platform

Reinforced plates, welded on the two main beams of swing platform, considerably improving the bending resistance performance. The right and left side beams and the cross beam, made of high-class steel and formed through punching, improve the strength of platform.

### Track rollers, carrier rollers and idlers and tracks

Track rollers, carrier rollers and idlers use seal-in lubrication that ensures a longer service life. The application of grease ensures the durability of track pins and shafts, and reduces travel noise. The tri-grouser track shoes rolled with high-strength alloy provide favorable contact, stability and durability. The track links have additional reinforced ribs to increase their strength, which can absorb the shock when the machine travels on rough surface.





## Scientific Structure and Easy Maintenance

### Incline Track Frame

The incline track frame makes the soil to fall easily and is easy to clean.

### Bigger Side Doors for Easy Maintenance and Replacement

Opening the left door allows you to easily access the desiccator and radiator, and etc.. Opening the right door allows you to easily check the main pump and Oil-water separator.

### Easy Cleaning of Radiator

Opening the left rear access door allows you to access the engine radiator. The radiator is protected with a cowl to prevent invasion of foreign substances. You only need to remove the cowl to clean it.

### Longer Maintenance Interval

The use of quality, large-size parts and components can effectively extend machine service life and maintenance intervals, reduce downtime, and improve operating efficiency.

### Easy-to-use Reliable Engine Hood Spring and Securing Bar

The engine hood is installed with a spring that can help you open the engine hood easily for engine service. The hood can be secured with the bar during maintenance or service of the machine in order to prevent injury caused by wind.

### Toolbox and Grease Bucket Storage Place

Toolbox and grease bucket storage place is designed to facilitate daily maintenance.



### Large-capacity Fuel Tank with Anti-rust Treatment

The 130L large capacity of fuel tank reduces time for refueling. Interior of the fuel tank has been treated well against rusting. No rusting will occur even if the tank is soaked in oil containing water and phosphoric acid and other chemicals for a long period of time.

### Three-level Oil Filter

The primary and secondary fuel filters and oil-water separator are used to improve fuel quality, reduce early wear of injection pump and nozzle and extend the service life of engine.

### Easy Replacement of Filter Element

In consideration of the convenience for replacing the parts, the fuel filter, engine oil filter, hydraulic oil filter and air cleaner are designed for remote installation. Opening the access door, you can replace them quickly on the ground.

### Bottom Drain Plug

The radiator, fuel tank, hydraulic oil tank and oil pan are equipped with screw plugs at the bottom, which is convenient for discharging foreign substances and waste liquid out in the change of oil or cleaning. A removable plate is mounted on the bottom to prevent damage to the drain plug.





# ECC (Enterprise Control Center)

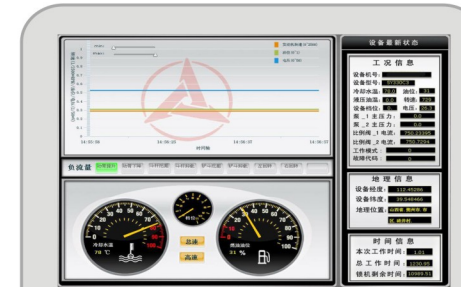
Track the machine working conditions anytime.....

## SanyECC Intelligent Management

Using intelligent equipment management system (IEM), SanyECC can read equipment conditions in real time. It also provides comprehensive device management, parts inquiry and purchase, personal assistant, knowledge corner and online message function to meet the customers' needs by means of GPRS, GPS, GIS, artificial intelligence, as well as streaming media and other information technology tools. At the same time, the perfect equipment remote monitoring capabilities can help you track the equipment conditions, electronic archive for product service, and material used for actual assembly, information access, the real-time equipment maintenance information. You can also purchase accessories online and get remote technical support. It makes the link between the manufacturer and the customer closer.

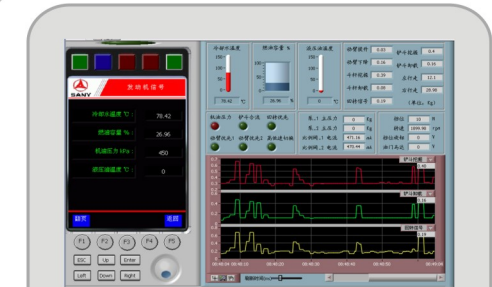


# Enterprise Control



## Equipment Management

The combination of the Internet with WAP allows you to get various types of conditions and location information of your excavator. In this way, you are able to, even at home, obtain information such as when the machine is started and shut down, how long the machine works for the day, and how much fuel it consumes. Machine operation information and fuel consumption details are available in related reports.



## Details of Your Excavator

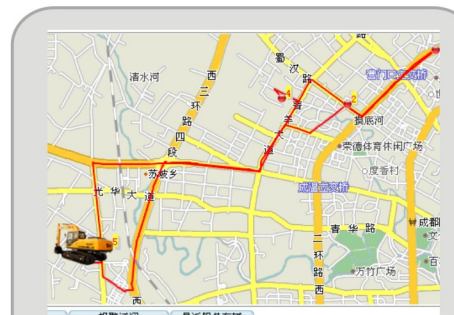
Via ECC remote monitoring center you can log on to the excavator machine controller interface and check the status of its working condition in real time. It can also record the details of the machine operation, monitor the use of machine by operator, and timely handle the faults of machine in order to ensure a longer service life.

## Convenient Management Functions

With the aid of Internet it is easy and quick to inquire and monitor the use of your machine via SanyECC system that facilitates online inquiry and ordering of parts. If you temporarily have no access to the Internet, you can also login WAP network to acquire operating information (for a day or a week) of your machine via mobile phone. When your machine shows abnormality during operation, the system will immediately send a message to your designated mobile phone.

The screenshot shows the SanyECC web interface. On the left is a login form with fields for '用户名: admin', '密码: \*\*\*\*\*', and '语言: 中文 English'. On the right is a '历史轨迹查询' (History Trace Query) section with a table of records.

序号	时间	地址	经度	纬度
1	2010-2-30 10:34:17	四川省成都市成都市区	103.97	30.66
2	2010-3-05 11:25:22	四川省成都市成都市区	104.03	30.68
3	2010-3-10 03:10:11	四川省成都市成都市区	104.05	30.69
4	2010-4-10 01:52:40	四川省成都市成都市区	104.01	30.69
5	2010-4-22 15:20:14	四川省成都市成都市区	103.97	30.66



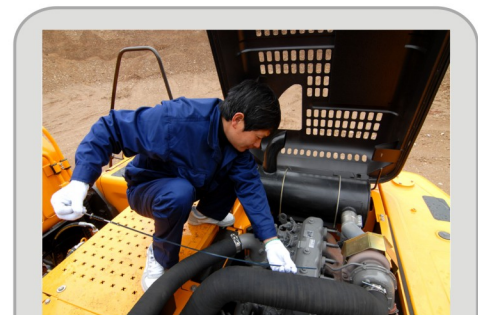
## The Moving Trace Record

ECC can get full detail records of the moving trace of the equipment on a time basis, which can effectively prevent the machine from being stolen and monitor the behavior of operator.



## Parts inquiry and ordering

Electronic archive of machine: the visualized material list and pictures provide easy access to specific part and related information. Status-of-stock access window: online application renders customer a easy way for parts purchase.

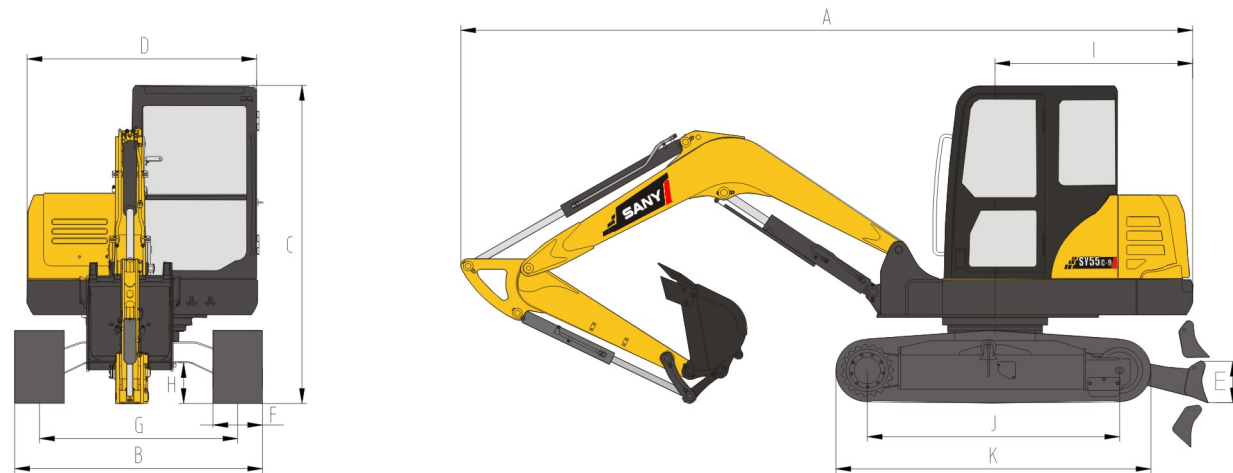


## Assisting customers for better maintenance

Equipment maintenance management: it also helps the customer maintain the equipment in time, and make sure the equipment works efficiently during its service life. Consumption points: Customers can obtain consumption points from every business dealing; the points can get further usage in the following dealings.



STANDARD EQUIPMENT

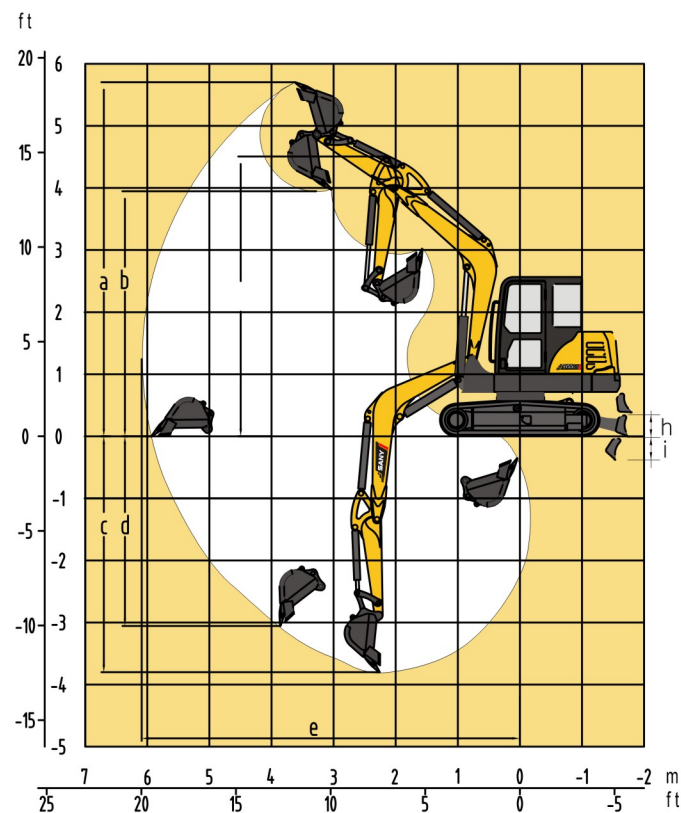


Machine Dimensions (mm)

Name	
A Length(shipping)	5930
B Width(Shipping/Operation)	2000
C Height(shipping)	2600
D Upper Width	1860
E Dozer blade height	340
F Std. Track Width	400
G Track Gauge	1600
H Min. Ground Clearance	330
I Tail Swing Radius	1640
J Length of Track on Ground	2045
K Track Length	2545

Working Ranges (mm)

Name	
a Max. cutting Height	5690
b Max. Dumping Height	3930
c Max. Digging Depth	3815
d Max. horizontal reach	6090
e Min. Swing Radius	2555
f Max. Height At Min. Swing Radius	4495



Engine

- GSB Mode Selection
- Start motor 24V
- Alternator 30A
- Air pre-filter
- Dry triple-filtering air cleaner
- Cylindrical engine oil filter
- Cylindrical fuel filter
- Fuel pre-filter
- Radiator with protective screen
- Auxiliary water tank for radiator
- Fan cowl
- Separately installed engine
- Oil-water separator

Hydraulic System

- Control valve with main relief valve
- Spare oil port for control valve
- Oil suction filter
- Oil return filter
- Pilot filter

Swing Platform

- Fuel level float
- Hydraulic oil level gauge
- Toolbox
- Swing brake
- Grease barrel holder
- Counterweight

Alarm

- Engine oil pressure lack
- Fuel oil lack
- Overheat of engine coolant
- Air filter blocking
- Engine over speed
- Voltage lower than specification
- Voltage higher than specification

Operator Station

- Noiseproof steel-structured cab
- Toughened light-color window
- 4 silicone rubber damping support
- Openable roof hatch, upper front window and left window
- Rear window, alternate exit
- Silent windshield wiper with washer
- Adjustable inclined seat with adjustable armrest
- AM-FM radio with digital clock
- Foot rest and floor mat
- Loudspeaker, rear view mirror
- Seat belt and fire extinguisher
- Cub holder and cab light
- Ashtray
- Storage box, literature bag
- Hydraulic lockout control
- Fully automatic air-conditioner

Air-conditioner system

- Cold and warm air-conditioner (Importing top grade)
- Control panel

Indicator light

- Auto idle
- Temperature of engine coolant
- High/Low travel speed
- Fault alarm
- Voltage lower/higher than specification
- Software download and communication

Others

- Standard battery
- Lockup engine hood
- Lockup fuel filler cap
- Anti-slip film, handhold and passage
- Travel direction mark
- Hand grease gun

Undercarriage

- Travel motor guard
- H-track guiding mechanism
- Hydraulic track tensioner
- Bolted sprocket
- Carrier roller and track roller
- Reinforced track link with pin seal
- 400 mm track shoes
- Bottom coverplate

Front Work Equipment

- Flange pin
- Bucket clearance adjustment
- Welded lever
- Central lubrication system
- Dust ring-seal of bucket pin for options

Monitoring System

- Auto-idle
- Large Color LED Monitor
- Fault diagnosis
- Engine warm up
- Engine coolant temperature