



SANY

Quality Changes the World



SANY HYDRAULIC EXCAVATOR SY135C

ENERGY SAVING STAR, LEADING THE INDUSTRY



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High Efficiency and Low Consumption

P3

Quality Parts Providing Better Reliability,
Durability and Longer Service Life

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HIGH EFFICIENCY AND LOW CONSUMPTION



◆ Faster Working Speed

Swing speed 12rpm

◆ High-power Engine

72.7kw/2200rpm

◆ Larger Workload

Bucket Capacity 0.53m³

◆ Larger Digging Force

Digging force of bucket 92.7kN
Digging force of arm 66.13kN

◆ Engine

The engine output power is 72.7kW with the increased hydraulic power and improved fuel efficiency.

SY135C adopts the engine customized for Sany. The engine with four-cylinder, four-stroke direct-injection turbocharger, provides strong operating power for the machine.



◆ Optimized Power Control

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

◆ The Electric Control Module to Achieve The Best Engine Efficiency

The electric control module has the capability of making quick 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 Electro-hydraulic Control System

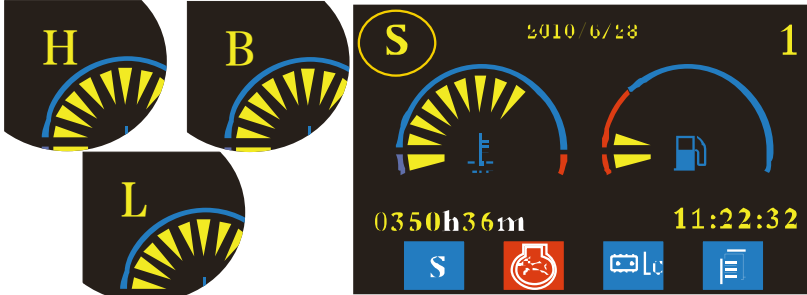
With a dual-pump, dual-circuit constant power control system, the engine can fully develop its power to provide a strong operating force. Optimized operation performance of the engine reduces the loss of power.

Through the electrical control (ESS control), such as engine throttle position feedback, the engine speed monitoring, and power limit regulation, as well as the hydraulic control (HSS control), such as main pump positive flow control, straight-travel proportional control, swing-priority proportional control, and bucket confluence proportional control, the engine can have a real-time power match with hydraulic pumps, which improves operational productivity and reduce fuel consumption.

An advanced computer dynamic control system (CDCS) determines engine output power as per the external load demand, achieving the optimum control of excavator – external load operation system.

◆ Operating Priority and Fuel-saving Priority Working Modes

Heavy duty mode: Full power output provides efficient operation.
Standard mode: 90% of the rated power reduces fuel consumption and noise.
Light duty mode: 80% of the rated power ensures fuel economy.
Break mode: 90% of the rated power reduces fuel consumption



QUALITY PARTS AND COMPONENTS PROVIDING BETTER RELIABILITY AND DURABILITY AND LONGER SERVICE LIFE

The engine customized for SANY gives high efficiency, low fuel consumption 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.



◆ Four Cylinder Diesel Engine

SY135C adopts the engine customized for Sany. This engine provides strong operating power and ensures high reliability and stability of the machine as a whole.

◆ Displacement 4.329L

The engine power of SY135C is 72.7kW, and the displacement is increased to 4.329L, which reduces the engine heat load and gives a longer service life.

◆ Excellent Cooling Effect

Fan guard: The radiator fan is enclosed with a protective net cover that prevents objects from falling into the fan to damage its blades.
Serially arranged coolers: water radiator, oil radiator, intercooler and condenser are arranged side by side; the aluminum radiator gives better cooling effect.



◆ Reliable Electronic Components

Special electronic devices have undergone severe test.
Controller / sensor / heat conductors

◆ Track Rollers, Carrier Rollers, Idlers and Tracks

Track rollers, carrier rollers and idlers use seal-in lubrication that gives a longer service life. The application of grease ensures the durability of track pins and shafts, and reduces travel noise.

◆ Wearable Bucket

Standard reinforced bucket with highly rigid steel sheet, tips and side cutters can serve a longer period.

◆ Reinforced Boom and Arm

The boom and arm use large-box structure, in which welded plates against torsion form a compact, strong and durable integrity that prevents deformation under larger digging force. With optimized design, the boom and the arm can provide considerable working range and depth on the occasion of ditching, excavating and common construction.



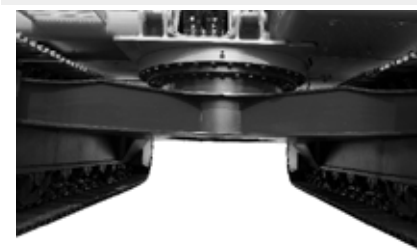
Quality Parts with High Durability and Reliability

The principal parts and components, such as the main pump customized for Sany, the main valve, swing unit, travel unit, pilot control valve, are of excellent performance.

The tri-grouser track shoe rolled with high-strength alloy provides 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.

◆ Capability Against Distortion and Bending Excellent High-strength Machine Body

Reinforced X-frame modeled with digital tools, through finite element analysis on loading capacity, realizes high-strength structure.



◆ High-strength Swing Platform

Reinforced plates, welded on the two main beam of swing platform, considerably improve the bending resistance performance.



◆ Track Link and Tension Mechanism

The track links have additional reinforced ribs to increase their strength, which can absorb the shock when the machine travels on rough surface.
The tension adjusting device is more reliable due to the adoption of a serially-arranged system that includes a grease-in tensioning cylinder and a damper spring.



COMFORTABLE AND SAFE CAB ENVIRONMENT



◆ Innovative Large Cab

The innovative large cab is equipped with an adjustable seat with suspension. The seat can be adjusted as desired. The rigidity of seat can also be adjusted according to the operator's weight.

◆ Longer Control Levers

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



◆ Pressure Sealed Cab

The sealed design ensures that the air pressure inside the cab is higher than outside, thus preventing the dust invasion.

◆ Automatic 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.



◆ Silicone Rubber Shock Absorber

innovative silicone rubber shock absorber is fixed to the swing platform in six points, which has minimized the shock brought by rough road and engine or hydraulic impact, considerably increased the stability of cab, and improved the comfort of operator.



◆ Anti-tipping and Falling Object Protection 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.



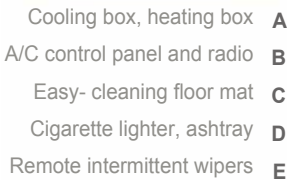
◆ Pump/Engine Screen

The pump chamber and engine chamber are separated with a screen, which can prevent leaked hydraulic oil from splashing onto the hot engine.



◆ Anti-skid Plates

The anti-skid plates with the star-shaped punching holes are covered the main valve and air filter, and the anti-skid films are provided on the machine body to prevent people from slipping during maintenance.



◆ Large Rear View Mirror and Alternate Exit

Rear view mirror is mounted on both sides of the cab, which can observe the situation behind the excavator without looking back. A cab window for alternate exit is also provided for operator to escape in case of emergency.



◆ Easy-cleaning Floor Mat

The floor mat can be washed with water. With a self-drain water port, the floor mat can be cleaned easily without removal.

◆ High-strength Top Plate

The top plate of cab is punch-formed with thick high-strength steel sheet integrated with reinforced ribs. Has good impact resistance, in a rockfall, not easily deformed under operating conditions; optional OPG top guard and the front window safety net. The door and windows are made of toughened glass. In addition to the seat belt equipped, the cabin maximizes the safety of operator.

◆ Heat Insulation/ Fan Guard

The engine is housed in excellent heat insulation to prevent accidental burns. The radiator fan is enclosed with a protective net cover that can prevent objects from falling into the fan to damage its blades.



EASY MAINTENANCE

The use of OEM parts and quality elements effectively extends the service life and maintenance intervals. The time for maintenance is also reduced. Remote installation of replacement parts gives easy maintenance, higher utility and lower service cost.

◆ Serially-arranged Cooling Units

Coolant radiator, oil radiator, intercooler and condenser are placed side by side for easy cleaning and maintenance. The aluminum radiators not only give good cooling effect but also can be recycled.

◆ Easy Replacement of Filter Element

The primary and secondary fuel filters and water separator are used to improve the fuel quality, reduce the early wear of injection pump and nozzle and extend the service life of engine. Opening the access door, you can replace them quickly on the ground.



◆ Incline Track Frame

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

◆ Large-capacity Fuel Tank with Anti-rust Treatment

The large capacity of fuel tank reduces the times 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.



◆ 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.

◆ 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.



◆ Easy Cleaning of Radiator

Opening the left rear access door allows you to access the engine radiator. The radiator is protected with a net to prevent invasion of foreign substances. You are only required to remove and clean the net.



◆ Standard Engine Oil Drain Valve

The use of this valve can prevent contamination of your clothes and the floor when engine oil is changed. This valve also makes maintenance of the machine easy.

EQUIPMENT SPECIFICATION

SPECIFICATION

ENGINE

Model	Isuzu BB-4BG1TRP
Displacement	4.329L
Engine power	
At rated engine speed	72.7kw/2200rpm

HYDRAULIC SYSTEM

Type	Positive control system
Number of selectable working modes	4
Main pump	
Type	Variable-capacity piston pumps
Maximum flow	2*121ltr/min
Hydraulic motors	
Travel	2* axial piston motor with parking brake
Swing	1* axial piston motor with swing holding brake
Relief valve setting	
Implement circuits	31.3mpa 306kg/cm2 4,539psi
Travel circuit	34.3mpa 336kg/cm2 4,974psi
Swing circuit	25mpa 245kg/cm2 3,625psi
Heavy lift circuit	31.3mpa 306kg/cm2 4,539psi
Pilot circuit	3.9mpa 38kg/cm2 565psi
Hydraulic cylinders	
Boom	2-105mm*990mm
Arm	1-115mm*1175mm
Bucket	1-100mm*885mm

OPERATING WEIGHT

Operating weight with standard bucket, fully serviced, +75 kg operator (ISO)	
Operating weight	13500kg

UNDERCARRIAGE

Track width	500mm
Number of track shoes	44
Carrier roller (per side)	2
Track roller(per side)	7

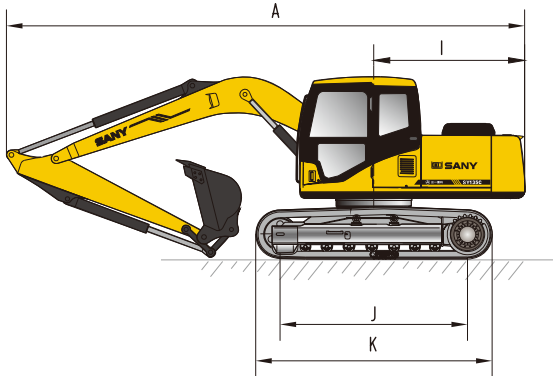
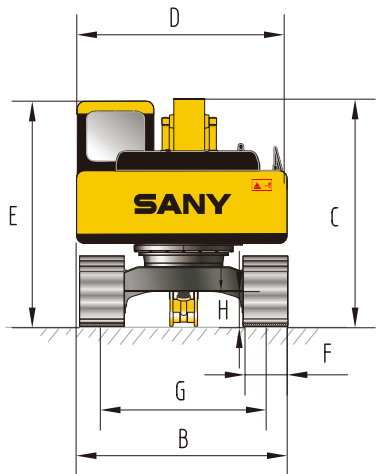
TRANSMISSION

Travel Speed (Highest/Lowest)	5.5/3.5km/h
Swing Speed	12rpm
Gradeability	70%/35°
Ground Pressure	41.7kpa

DIGGING FORCE

Bucket Digging Force	92.7kN
Arm Digging Force	66.13kN

DIMENSION



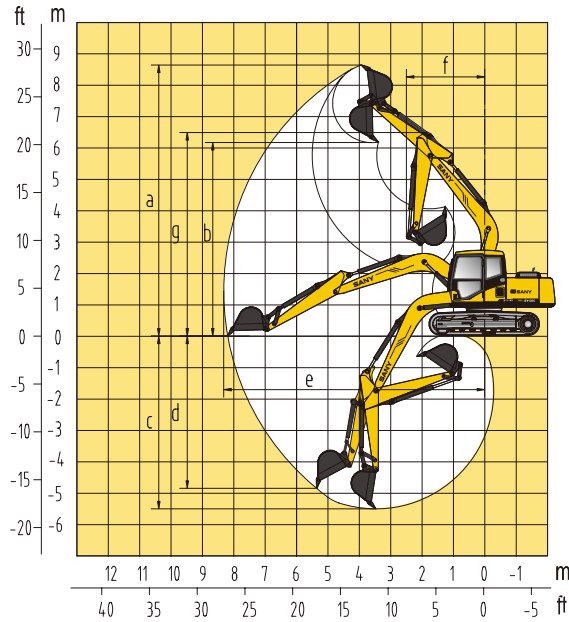
Item (Unit: mm)	SY135C
A Length (During Transportation)	7700
B Width	2550
C Height (During Transportation)	2815
D Upper Body Width	2490
E Blade Height (to Cab Roof)	2740
F Std. Track Width	500
G Track Gauge	1990
H Min. Ground Clearance	425
I Tail Swing Radius	2205
J Roller Gauge	2930
K Track Length	3665

BUCKET OPTIONAL

Capacity		Width		Weight	Number of Teeth	Arm length			
SAE	CECE	Without Side Cutters	With Side Cutters			2500mm	mm	mm	mm
0.5	0.45	854	947	406	5	■			
0.53	0.48	860	958	480	4	■			
0.6	0.54	860	958	489	4	■			

- Suitable for materials with density of 1 800 kg/m3 (3 030 lb/ft³) or less
- Suitable for materials with density of 1 600 kg/m3 (2 700 lb/ft³) or less
- Suitable for materials with density of 1 100 kg/m3 (1 850 lb/ft³) or less

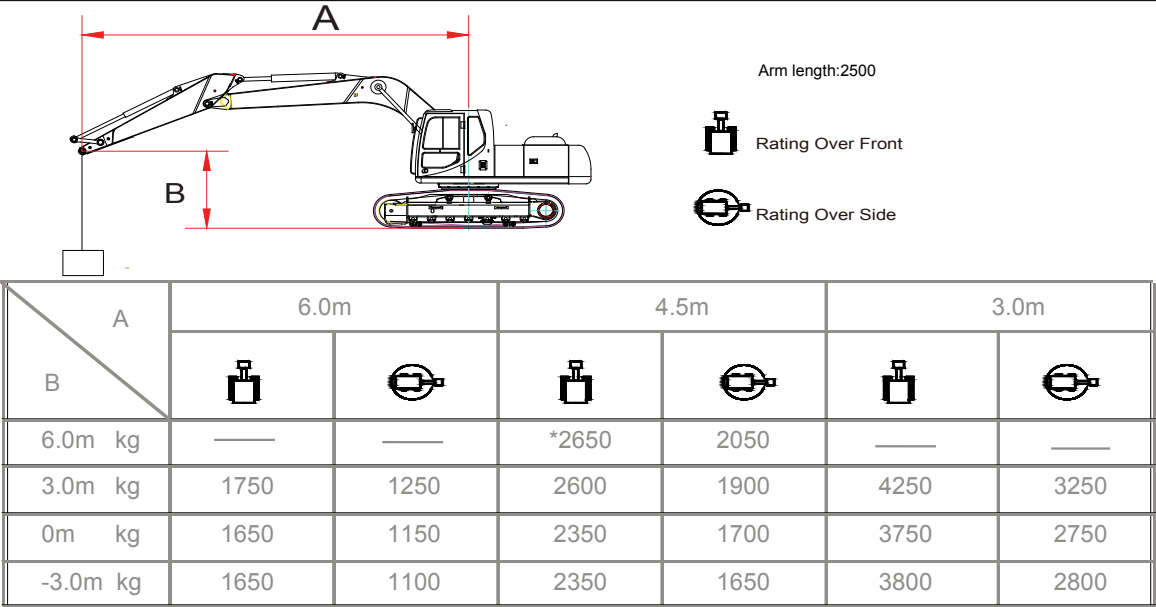
OPERATION RANGE



Item (Unit: mm)	SY135C
a Max. Digging Height	8645
b Max. Dumping Height	6175
c Max. Digging Depth	5500
d Max. Vertical Digging Depth	4850
e Max. Excavating Distance	8290
f Min. Swing Radius	2500
g Height at Min. Swing Radius	6500

Materials and specifications are subject to change without further notice in accordance with our continuous technical innovations.Photos and illustrations may not include additional equipments.

SY135C LIFTING CAPACITY



Remarks:

1.Rated figure meets the criterion of GB/T 13331-2005/ISO 10576

2.Rated rollover loading is 75% of static rollover loading, rated limiting hydraulic weight is87% of limiting hydraulic weight.

3. Loading radius is the distance from the loading point to the swing center.

4. The figure with * stands for the rated figure of the limiting hydraulic weight.

Pressure and Capacities

WELGHTS AND GROUND PRESSURE

Shoe type	Shoe width	Mode SY135C8I2K/SY135C8M2K	
		Wperating weight	Ground pressure
Tripe grouser	500mm	13500Kg	41.2Kpa

SERVICE REFILL CAPACITIES

	Liters	US gal	Lmp gal
Fuel tank.....	240	63.1	52.8
Engine coolant.....	18.5	4.9	4.1
Engine oil.....	13.2	3.5	2.9
Swing device.....	1.8	0.5	0.4
Travel device(each side).....	2.1	0.6	0.5
Hydraulic system.....	/	/	/
Hydraulic oil tank.....	150	39.5	33

STANDARD OPTIONAL

STANDARD EQUIPMENT

◆Engine

- Engine Mode control (H, S, L and B)
- Start motor 24V/5KW
- Alternator 24V/50A
- Air pre-cleaner
- Dry double-filtering air cleaner
- Cylindrical engine oil filter
- Engine oil cooler
- Radiator with protective screen
- Auxiliary water tank for radiator
- Fan cowl
- Separately installed engine
- Automatic deceleration system
- Accelerating system

◆Operator Station

- Noiseproof steel-structured cab
- Toughened light-color window
- 6 silicone rubber damping support
- Openable roof hatch, upper front windowand left window
- Rear window,alternate exit
- Silent window wiper with washer
- Adjustable inclined seat with adjust-able 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、alternate hammer
- Storage box, literature bag
- Hydraulic lockout control
- Fully automatic air-conditoner
- Cab visor

◆Monitoring System

- Hour meter, fuel tank oil level gauge
- Engine coolant thermometer
- Engine oil pressure gauge

◆Hydraulic System

- Working mode selection switch
- Power enhancement device
- Control valve with main relief valve
- Spare oil port for control valve
- Oil suction filter
- Oil return filter
- Pilot filter

◆Undercarriage

- Travel brake
- Travel motor guard
- H-track guiding mechanism
- Hydraulic track tensioner
- Bolted sprocket
- Double carrier roller and track roller
- Reinforced track link with pin and seal
- 500 mm track shoe
- Reinforced side pedal
- Bottom coverplate

◆Swing Platform

- Hydraulic oil level gauge
- Toolbox
- Rear view mirror (R and L)
- Swing brake

◆Indicator Lights

- Auto-idle, engine warm up
- Engine oil level, engine coolant temperature

◆Front Work Equipment

- Flange pin
- Bucket clearance adjustment
- Welded lever
- Central lubrication system
- Dust ring-seal of bucket pin
- 4.7 m fully-welded box boom
- 3.3 m fully-welded box arm
- Guard
- 0.53m3 standard bucket

◆Alarm Lights

- Oil pressure lack, engine coolant overheat
- Throttle knob fault
- Fuel oil lack
- Voltage higher than specification
- Engine over speed

◆Others

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



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B06S2ENAM1-SY135C TIER2

