The Engine Customized For Sany Realized High Efficiency And Low Consumption

Less Vibration and Low Noise Luxurious and Comfortable Cab

Ergonomic Design Maximize The Operating Safety

Scientific Structure and Easy Maintenance

Equipment Specification

Standard & Optional
With a dual-pump, dual-circuit constant power control system, the engine can fully develop its power. The perfect combination of this two realizes the heavy-duty mode with large workload, the standard-mode with auto-adjusted engine speed and light-duty mode, high efficiency and low fuel consumption, while optimizing the combustion.

### Rotary Mechanism

- **Large-torque Travel Mechanism**
  - The largest Nabtesco series large-torque travel mechanism is adopted, to improve driving force and reliability, and improve operational efficiency.
- **Travel Pilot Valve with Hydraulic Damping Device**
  - When starting or stopping, this device improves machine travel manageability via vibration absorption and reduces operation fatigue.
- **Secondary Boosting Technology**
  - Overall machine overflow pressure can be increased without pressing the secondary boosting button to improve excavation force and operation speed.
- **Precise Swing Control**
  - Improved vibration absorption and ensures smoothness of swing operation.
- **Optimized Main Valve**
  - Optimized Kawasaki main valve customized for Sany, with excellent combined movement coordination and leveling performance improves boom and arm operating speed, boom-down regeneration, and bucket convergence performance to enable higher operating efficiency.
- **Reduced Arm Oil Pressure Loss and Improved Operation Speed**
  - Two return oil pipes on the big end of the arm cylinder and the oil inlet pipe of larger diameter reduce the arm pressure loss during digging and dumping operation to ensure higher working speed.

- **Arm Regeneration Circuit, Faster Digging Speed and Lower Energy Loss**
  - A quick circuit is added to the arm oil cylinder circuit. The hydraulic oil in arm cylinder rod end does not return to the tank but goes directly to the cylinder head end. The arm speed is increased as a result. The fuel consumption is low under this condition.

- **Auto Deceleration System**
  - The function of auto deceleration or acceleration reduces fuel consumption by 5-10%. When an operation has been stopped for 3 seconds, the engine speed drops automatically to idle level and maintains the idling state. 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.

- **Working Mode Selection**
  - Touch the display to switch working mode.
    - Heavy duty mode: maximum operating efficiency.
    - Standard mode: reducing fuel consumption and noise.
    - Light duty mode: lower fuel consumption and high economy.
    - Breaker mode: special for hammer.

- **Latest Swing Mechanism**
  - The latest Kawasaki large-torque swing mechanism is used, and rotary torque is increased by 32% from the original 100.6kN.M to 132.8kN.M. Swing starting-torque is enhanced with reduced swing drift (SY335C).

### Travel Mechanism

- **Large-torque Travel Mechanism**
  - SY335C travel motor driving force increased to 274KN.
  - SY365C travel motor driving force increased to 320KN.

### Swing Mechanism

- **Pilot Valve with Hydraulic Damping Device**
  - When machine is being started or stopped, this device improves machine travel manageability through vibration absorption and reduces operation fatigue.

- **Secondary Boosting Technology**
  - Overall machine overflow pressure can be increased without pressing the secondary boosting button to improve excavation force and operation speed.

- **Precise Swing Control**
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❖ **Comfortable and Safe Environment**

![Comfortable and Safe Environment](image)

- **Innovative Large Cab**
  The height of seat, the inclination of backrest, the height of armrest, the seat position and the headrest can be adjusted as desired.

- **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.

- **Cab Door and Front Window are Easy to Open, Close and Lock**
  Cab door can be opened by 180° and secured by locking mechanism either open or closed. 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 mornights.

- **Longer Control Levers**
  The control levers and joysticks designed and arranged according to human engineering, can be operated easily. Each operation button is within the reach of operator.

- **Well-sealed Cab, Clean and Quiet**
  Equipped with excellent sealing ring, the cab is free from dust and rain. Quiet cab can effectively relieve the fatigue of operator.

- **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.

- **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.

- **Three Stage Air Filtering**
  Equipped with air pre-cleaner and dual air filtering elements, the three-stage air cleaner ensures supply of sufficient clean air that can reduce the wear of cylinders.

- **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.

- **Hydraulic Lockout Control**
  When the hydraulic lockout control is placed in LOCK position, all controls are inoperative, which prevents accidents caused by unintentional operation.

- **Reduce Fatigue**
  The seat rigidity can be adjusted according to the driver’s weight, even if the big drivers can enjoy a comfortably operation.

- **Luxurious Mechanical Damping Seat**
  The suspension rigidity can be adjusted according to the drivers’ weight, effectively absorbing the vibration came from the cab floor to improve comfort and reduce fatigue.
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- **Falling Object Protection Structure**
  The cab is punch-formed with thick high-strength steel sheet. The door and windows are made of toughened glass. In addition to the seat belt equipped, the cabin maximizes the safety of operator.

- **Larger View**
  Operation safety is improved as a result of narrowed blind zone of vision by means of improved cab design featuring reduction of the size of column without decreasing the structural strength of the cab. The front and side window enable the operator to see clearly work equipment condition and the surroundings; the rear window and the engine hood of properly designed height provide a good rear view.

- **Optional Equipment**
  Top guard net in line with ISO, OPG standard.

- **High Standards Safety Design**
  Safety design meets European, US and Japanese safety standards, and has reached world-class security and reliability standards.

- **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.

- **Large Handrails**
  Large handrail ensures operator safety during mounting and dismounting.

- **Anti-skid Pedals**
  Specially designed pedal, can effectively prevent the operator from slipping and skid.

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

- **Environment-friendly Engine Customized for Sany Is In Line with EPA Tier 2 and Eu Tier 2 Emission Standards.**

- **Low-noise Design to Meet Noise Emission Requirement**
  To meet noise emission standard of GB 16710.1-1996, the engine adopts sound-absorbing materials and is equipped with curved wind guide cover and muffler, reducing air resistance and noise emission. Improved damping system and various anti-noise designs of components reduce noise efficiently. Noise level around the operator is less than 80dB (A) (reference value is 80dB (A)).

- **Boom and Arm Holding System**
  The holding valve on the main control valve can prevent the boom and arm from declining under their own weight and extend holding time, improving reliability of the machine.

- **Anti-swing Valve and Delay Valve**
  Swing mechanism with anti-swing valve and delay valve makes swing operation more stable and reliable; swing brake ensures safety of machine stopping.

- **Track Shoe Fender and Track Tensioner**
  Track shoe fender ensures proper positioning of the track. Track tensioner consists of a grease filling cylinder and a shock-absorbing spring, providing adequate track tension during machine travel.
Scientific structure and configuration ensure easier and faster maintenance.

- Easy Cleaning for Radiator
  One end of the air conditioner condenser is fixed with hinges for easy cleaning. Innovation radiator with easily washable internal structure, excellent cooling capacity ensures prolonged engine running without being overheated.

- New Engine Oil Drain Valve
  Additional drain port on engine bottom cover makes oil change possible without removing the cover plate.

- New Swing Mechanism Oil Drain Valve
  Additional oil drain valve on swing mechanism makes gear oil replacement much easier.

- Water Separator and Three-level Fuel Filter
  Water separator can remove the water in fuel and prevent fuel system failures. The function of fuel pre-filter can be developed to make maintenance easy. Fuel pre-filter also has the same function as a water separator.

- Accessible Engine Oil Filter and Bottom Drain Plug
  Accessible oil filter installed far away the engine, ensure easy maintenance. 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.

- Extended Lubrication Port of The Swing Bearing is Used
  For the convenience of lubricating the swing bearing, grease filling of the swing mechanism is extended to the front through the grease tube installed along the swing gear.

- Standard Equipped Oil Drain Pipe
  The use of this pipe can prevent contamination of your clothes and the floor when engine oil is being changed, and maintenance becomes easier.

- 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.

- Monitoring Function
  When an abnormality occurs while the engine is running, warning alarm on the monitor will sound, alarm indicator will light up and auto-diagnosis will start. The monitor displays fault name and location and relevant information.

- Incline Track Frame
  The incline track frame makes the soil to fall easily and is easy to clean.
SANY HYDRAULIC EXCAVATOR SY335C/SY365C

**SPECIFICATION**

**ENGINE**
- Model: Isuzu 6HK1-XABEA-08-C2/AA-6HK1XQP
- Displacement: 7.79L
- Engine power at rated engine speed: 190.5kW/2000rpm

**HYDRAULIC SYSTEM**
- Type: negative control system
- Number of selectable working modes: 4
- Main pump: variable capacity piston pumps
- Maximum flow: 2360L/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: 34.3mpa, 336kg/cm², 4974psi
  - Travel circuit: 34.3mpa, 336kg/cm², 4974psi
  - Swing circuit: 28.5mpa, 279kg/cm², 3944psi
- Hydraulic cylinders:
  - Boom: 2-140mm*1480mm
  - Arm: 1-170mm*1685mm
  - Bucket: 1-140mm*1285mm
- Number of selectable working modes: 4

**UNDERCARRIAGE**
- Track width: 600mm
- Number of track shoes: 49
- Carrier roller (per side): 2
- Track roller (per side): 9
- Swing Speed: 9.5rpm
- Gradeability: 70%/35°
- Ground Pressure: 52.8/61.5kpa

**TRANSMISSION**
- Travel Speed (Highest/Lowest): 5.4/3.2, 5.5/3.5km/h
- Swing Speed: 9.5rpm
- Gradeability: 70%/35°
- Ground Pressure: 52.8/61.5kpa

**SERVICE CAPACITIES**

**DIGITAL FORCE**

**OPERATING WEIGHT**
- Operating weight with standard bucket, fully serviced, +75 kg operator (ISO)
- Operating weight: 33500/34100kg

**DIMENSION**

**BUCKET OPTIONAL**

**OPERATION RANGE**

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.
## SY335C/365C LIFTING CAPACITY

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<th>Arm</th>
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<tr>
<td>Maximum</td>
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</table>

### Fuel tank
- SY335C: 540/620 liters
- SY365C: 620/720 liters

### Engine coolant
- SY335C: 7635 liters
- SY365C: 6063.7 liters

### Maximum engine
- SY335C: 7635 liters
- SY365C: 6063.7 liters

### Transmission oil tank
- SY335C: 55/33 liters
- SY365C: 53/31 liters

### Hydraulic oil tank
- SY335C: 7.8/8.1 liters
- SY365C: 8.2/9.8 liters

### Standard Equipment
- Mode control (H, S, L and B)
- Start motor 24V/4.5KW
- Alternator 70A
- Air pre-cleaner
- Dry double-filtering air cleaner
- Cylindrical engine oil filter
- Cylindrical fuel filter
- Engine oil cooler
- Radiator with protective screen
- Auxiliary water tank for radiator
- Fan cover
- Separately installed engine
- Automatic deceleration system
- Accelerating system
- Noiseproof steel-structured cab
- Toughened light-color window
- Silicone rubber damping support
- Openable roof hatch, upper front window and left window
- Rear window, alternate exit
- Silent window 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
- Cup holder and cab light
- Ashtray
- Storage box, literature bag
- Hydraulic lockout control
- Fully automatic air-conditioner
- Cab visor

### Swing Platform
- Fuel level float
- Hydraulic oil level gauge
- Toolbox
- Rear view mirror (R)
- Swing brake

### Monitoring System
- Hour meter, fuel tank, fuel level gauge
- Engine coolant temperature
- Oil pressure display
- Locking information
- Signal status
- Fault information tips

### Undercarriage
- Bolted sprocket
- Carrier roller and track roller
- Reinforced track link with pin and seal
- 600 mm track shoe
- Reinforced side pedal
- Bottom coverplate
- Flange pin
- Bucket clearance adjustment
- Welded lever
- Central lubrication system
- Dust ring-seal of bucket pin
- Guard
- 1.5/1.6m standard bucket
- (SY335C/365C)

### Operator Station
- Noiseproof steel-structured cab
- Toughened light-color window
- Silicone rubber damping support
- Openable roof hatch, upper front window
- Window and left window
- Rear window, alternate exit
- Silent window 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
- Cup holder and cab light
- Ashtray
- Storage box, literature bag
- Hydraulic lockout control
- Fully automatic air-conditioner
- Cab visor
- Flange pin
- Bucket clearance adjustment
- Welded lever
- Central lubrication system
- Dust ring-seal of bucket pin
- Guard
- 1.5/1.6m standard bucket
- (SY335C/365C)

### Front Work Equipment
- Flange pin
- Bucket clearance adjustment
- Welded lever
- Central lubrication system
- Dust ring-seal of bucket pin
- Guard
- 1.5/1.6m standard bucket
- (SY335C/365C)

### Alarm Lights
- Oil pressure lack, engine coolant Over heat
- Throttle knob fault
- Fuel oil lack

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

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**Weights and Ground Pressure**

<table>
<thead>
<tr>
<th>Shoe type</th>
<th>Shoe width</th>
<th>Mode SY335C</th>
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<tr>
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