

○ Standard configuration

Engine

- Isolated mounted engine
- Dynamic optimizing mode control
- Radiator
- Independent self-filtering circulating system
- 24V/5.5KW starter motor
- 50A alternator
- Oil-bath type air filter
- Dry-type dual-element air filter
- Engine oil filter
- Three-stage fuel oil filter
- Engine oil cooler
- Radiator auxiliary water tank
- Fan deflector
- Automatic idling system
- Fuel filling pump and electronic pump

Hydraulic system

- Operating mode selector switch
- Control valve with main overflow valve
- Control valve with spare oil port
- Oil suction filter
- Oil return filter
- Pilot filter
- Oil drain filter

Slewing platform of superstructure

- Fuel oil level sensor
- Hydraulic oil level gauge
- Toolbox
- Slewing parking brake
- Rearview mirror (right)
- Rearview camera *
- Cab alarm lamp *

* Indicates optional configuration

Cab

- Ultra-silence frame cab
- Reinforced light-color glass window
- Silicone oil rubber damper
- Openable top/front wall upper window and left side window
- Emergency exit on rear window
- Wiper (with washer)
- Multidirectional adjustable seat
- Radio (with digital clock)
- Foot rest and floor mat
- Loudspeaker and rearview mirror
- Seat belt and fire extinguisher
- Cup holder and compartment lamp
- Ash tray and escape hammer
- Storage box and sundries bag
- Pilot controlled cut-off lever
- Fully-automatic A/C
- Sun shade
- Emergency stop switch
- Falling object protect structure and front protective screen

Front-end working device

- Flange pin
- Bucket clearance adjuster
- Welded connecting rod
- Integrated lubricating system
- All bucket pins are equipped with dustproof seal ring
- Reinforced all-welded box-type boom
- Reinforced all-welded box-type bucket rod
- Anti-collision guard plate

Instruments of monitoring system

- Global positioning system (GPS)
- 7" colored display screen
- EEVIA system
- Hour meter, fuel tank oil level gauge
- Engine coolant temperature gauge
- Engine oil pressure gauge

Traveling body of undercarriage

- Traveling parking brake
- Traveling motor guard plate
- H-shaped track guide mechanism
- Hydraulic tensioning device of tracks
- Bolted driving wheel
- Carrier roller and thrust wheel
- Reinforced chain track with pin shaft seal
- 600mm double-rib track plate
- Reinforced side pedal
- Bottom cover plate

Alarm system

- Controller failure
- Abnormal pump pressure
- Pilot pressure of various movements abnormal
- Abnormal power supply voltage
- Starter motor relay abnormal
- Abnormal hydraulic oil temperature
- Engine oil pressure insufficient and engine coolant temperature too high
- Throttle rotary knob failure
- Fuel volume insufficient

Others

- High-capacity storage battery
- Lockable engine hood
- Lockable fuel filler cap
- Anti-slip pedal, armrest and sidewalk
- Traveling direction sign on traveling frame
- Manual grease gun
- Motor-driven diesel pump



- Rated power
300kW/1800rpm
- Overall weight
51000kg

SY550H

Hydraulic excavator

BRAND NEW C10
KING OF MINING EQUIPMENT
ASSET OF GREAT VALUE

Wonderful Sany Lead by Innovation



SANY Heavy Machinery Co., Ltd.

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- www.sanygroup.com.cn

Note

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SY550H

Powerful Tool for Mining Excavation The King of Crushing



New-generation Super Hydraulic Excavator for Mining



SELLING POINTS

SY550H is a new-generation 50T-level super hydraulic excavator product for mining produced by SANY Heavy Machinery. It is designed particularly for heavy-duty mining conditions and targets to improve customer's investment return. As compared with competitor brands, it has the advantages including "super excellent performance, super high adaptability, super long service life and super low maintenance cost".



Special working condition
Dedicated design



Super high adaptability



Super long service life

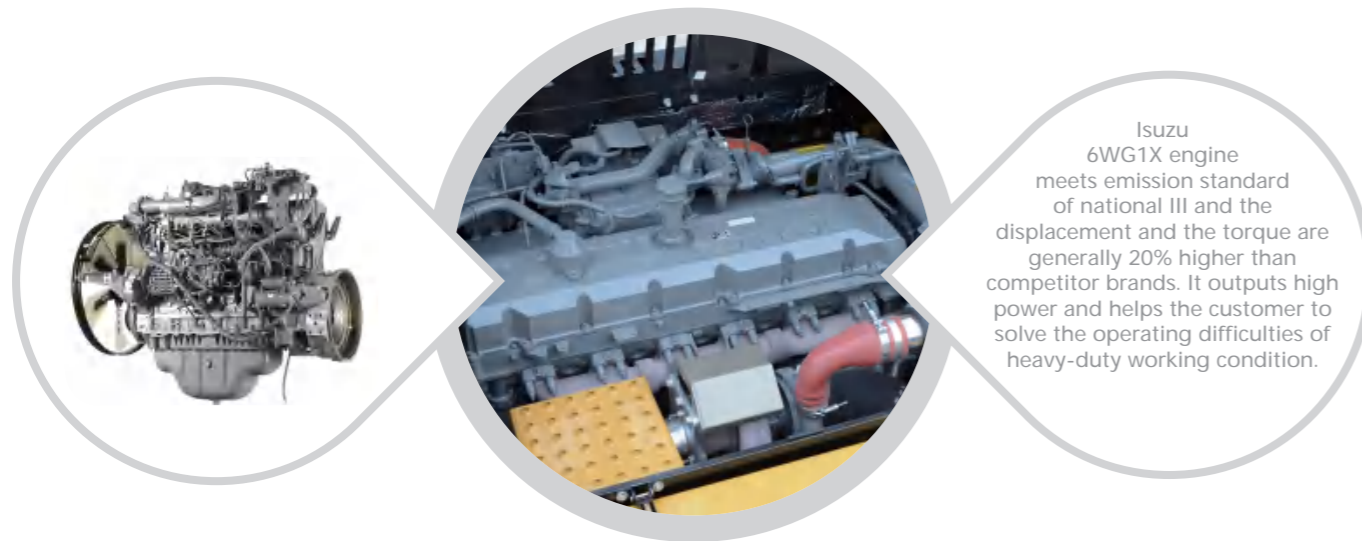
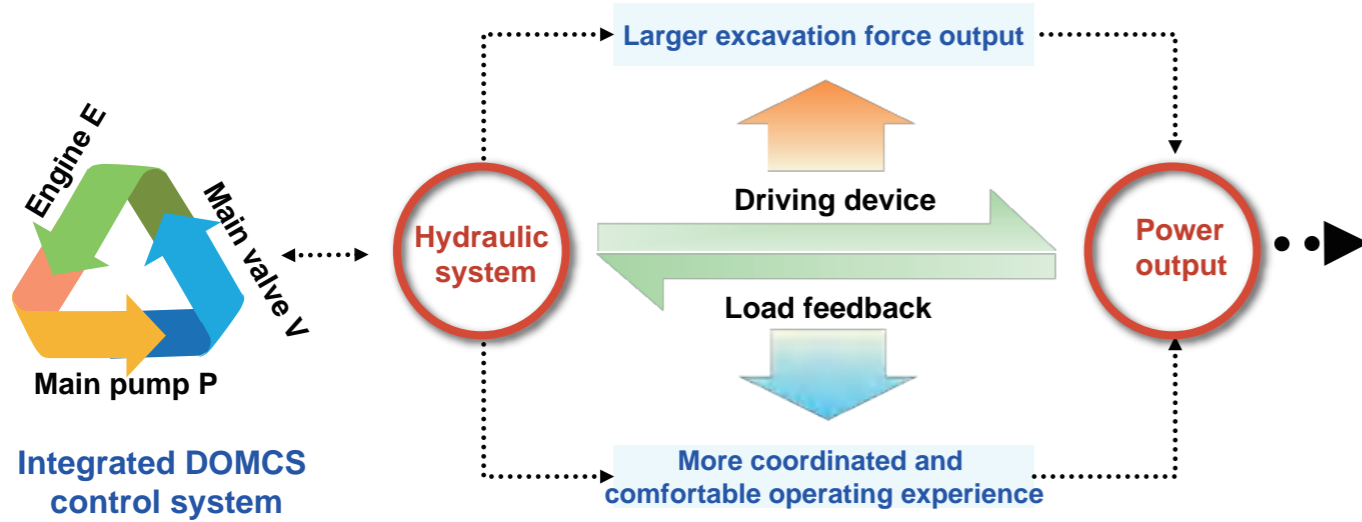


Super-low maintenance cost

SUPERIOR PERFORMANCE

High efficiency and low consumption

With "positive flow" system and "DOMCS" dynamic hunting intelligent matching control system developed independently by SANY, the efficiency and fuel consumption surpass competitor brands. The efficiency is 8% higher and the fuel consumption is 10% lower. The engine is exclusively for SANY, with strong power and high reliability. Thus, it can ensure the continuous operating stability in severe environment. As compared with foreign brands, it not only saves fuel but also works faster!

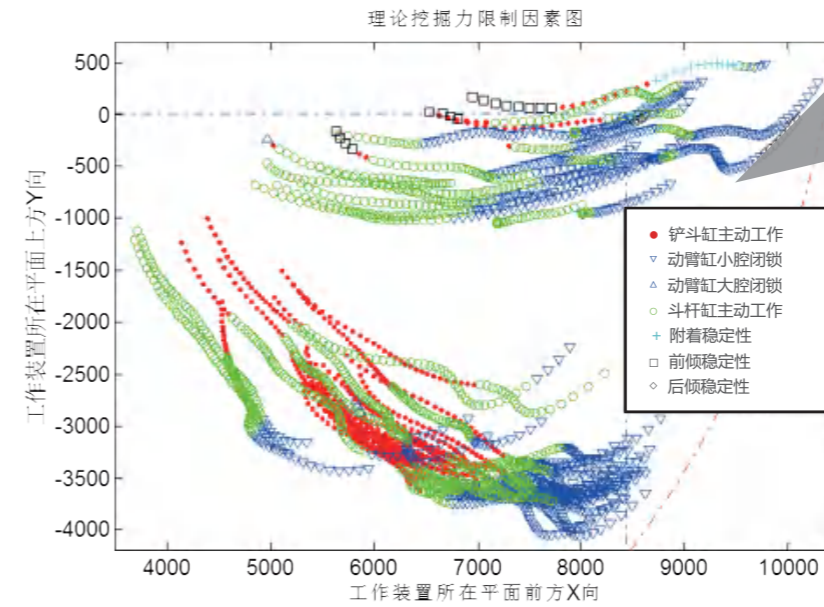


Isuzu 6WG1X engine meets emission standard of national III and the displacement and the torque are generally 20% higher than competitor brands. It outputs high power and helps the customer to solve the operating difficulties of heavy-duty working condition.

It could save 100,000 RMB every year according to the calculations as per annual working time of 3,000h and diesel oil price of 7 RMB/L under the condition that standard gear (S9) works.

Super high excavating force

By way of regulating power in real time in excavating process and atlas analysis of excavating force under full working conditions, the excavating force is given into full play, and the efficient area of excavating force is improved by 40%.



Green curve in the diagram indicates that the digging efficiency is given into full play and blue curve indicates other digging efficiency. As shown in the diagram, the region in which the digging force of SY550 is given into full play reaches 90% and others only reach 50%.

Super crushing force

To optimize the pipeline and reduce pressure loss, double pumps can be combined for crushing. Larger crushing hammer can be equipped optionally to increase the impact of crushing.



Comments of an excavator operator with over 12 years' of experience in Sichuan Province on SY550H:

The stones in our mine are so hard that only this machine can crush them!

HIGH ADAPTION ABILITY

By improving safety & cooling capacity, and utilizing efficient filtering system and "highly corrosion-resistant" coating, SY550H's adaptability to environment, working conditions and oils is improved.

High corrosion-resistant coating

With new coating system, service life of the paint is improved by 50%

50%

Independent oil radiator

The equipment is always working under optimal temperature, the system efficiency is high and energy loss is low

High-capacity multi-stage filter system

In allusion to the problem of poor fuel quality in China, enable the machine to operate under severe mining conditions

Standard working device connector

It can be equipped with more than 10 kinds of special working devices, such as crushing hammer and ripping hook etc.

Over **20** kinds

FOPS/ROPS cab

With high-strength cab and protective screen etc., working safety is improved by 30%

30%

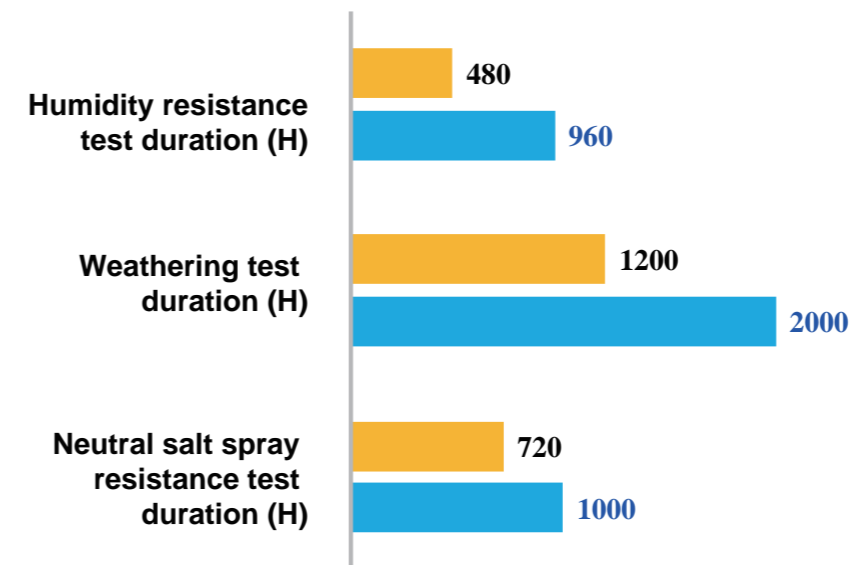


High corrosion coating

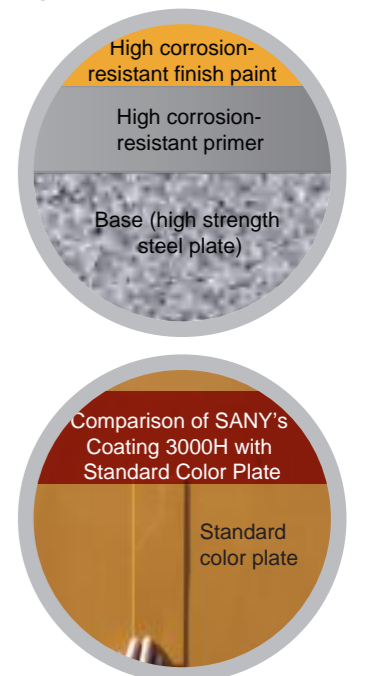
By cooperating with world known paint brands, aging life of the paint reaches the highest level in the industry. The adaptability is improved by 40%

Comparison of coating endurance test data

Common coating Sany coating



Coating distribution of SANY's high corrosion-resistant paint

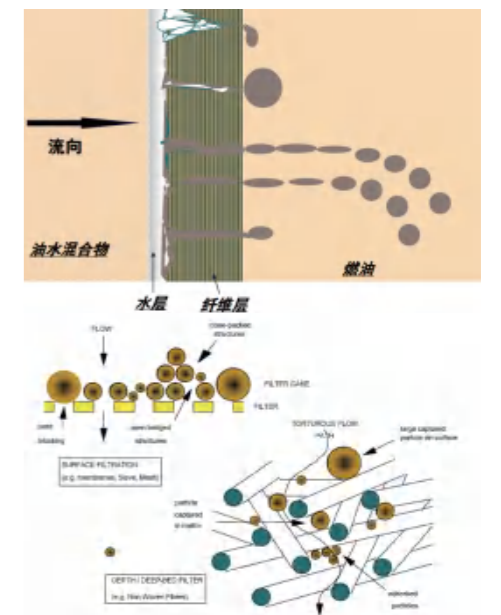


High-capacity Multi-stage Filtration System

Domestically initiative self-circulation "large-capacity multi-stage filter system" is launched in allusion various oils and meets emission requirements of national III standard. Provide top-level protection for the equipment!



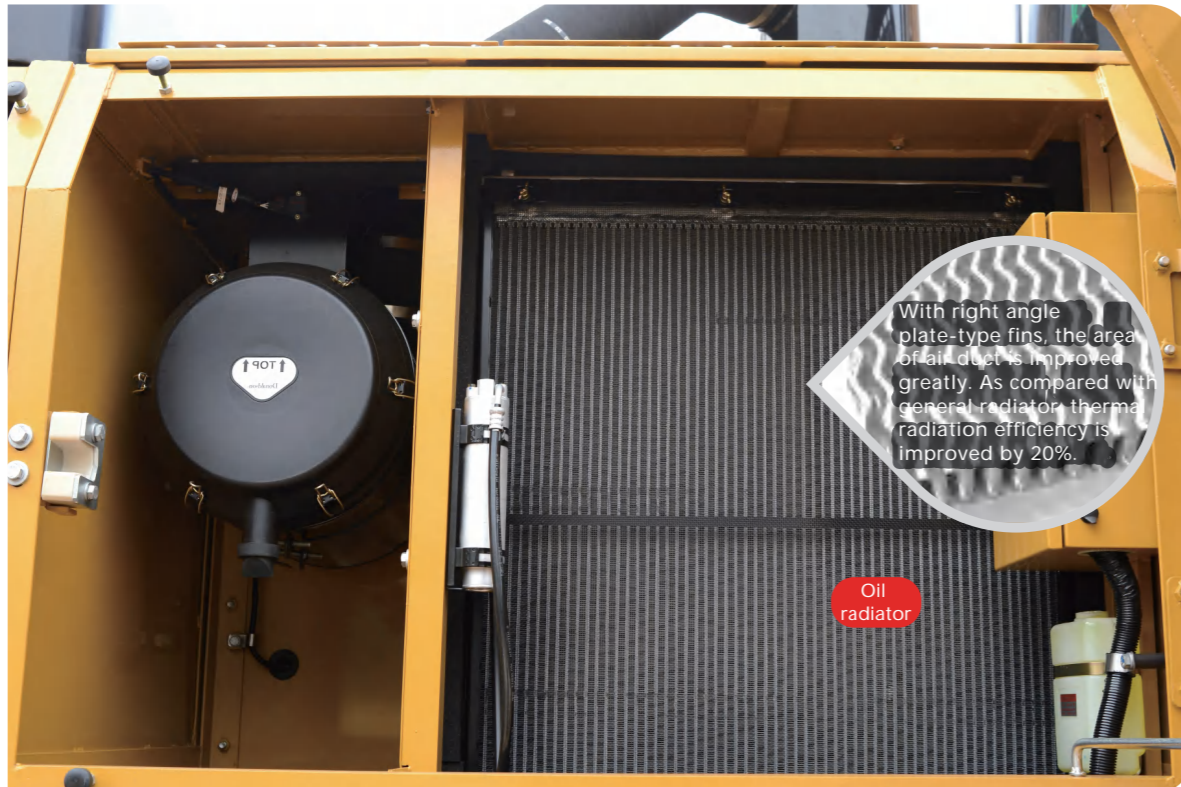
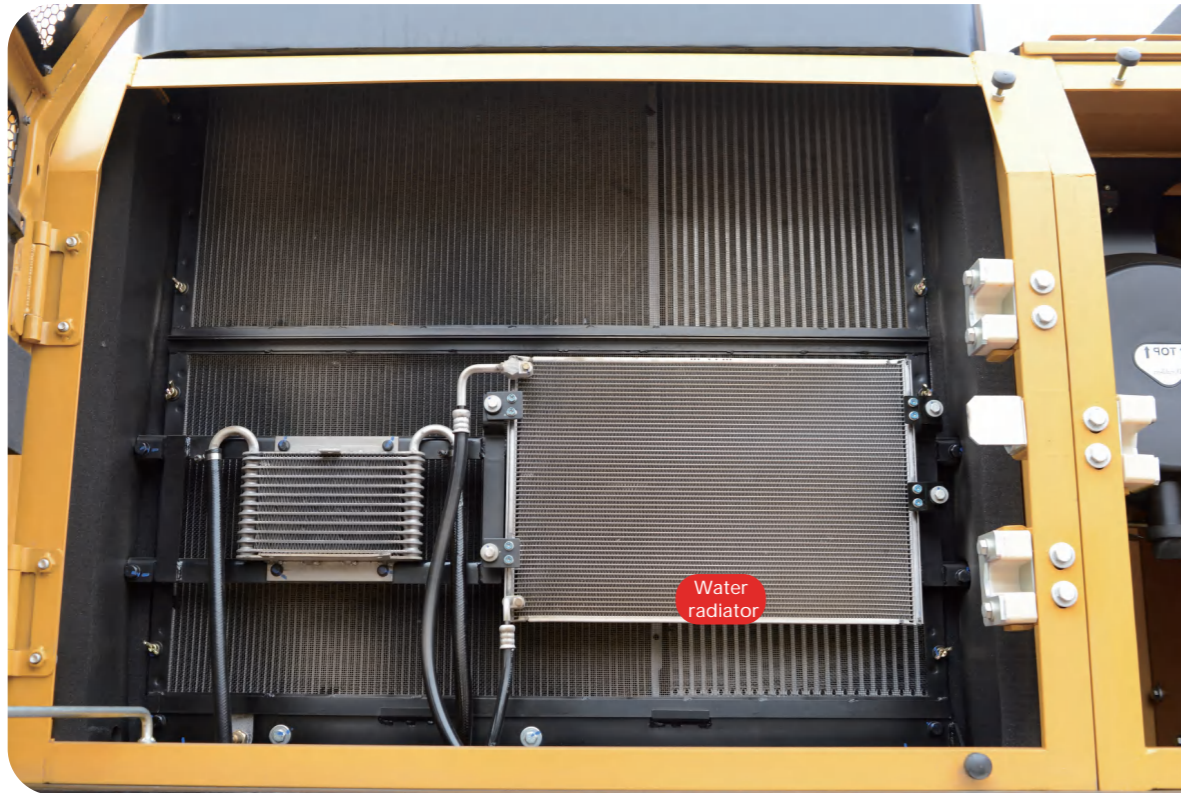
High-capacity multi-stage filter system



Large-capacity multi-stage filter principle

○ Independent oil radiator

Domestically initiative 50T independent oil radiator system is introduced. System operating temperature is 8-10°C lower than general excavator. The adaptability to high temperature environment is improved significantly. Service life of rubber parts is improved by 30%.

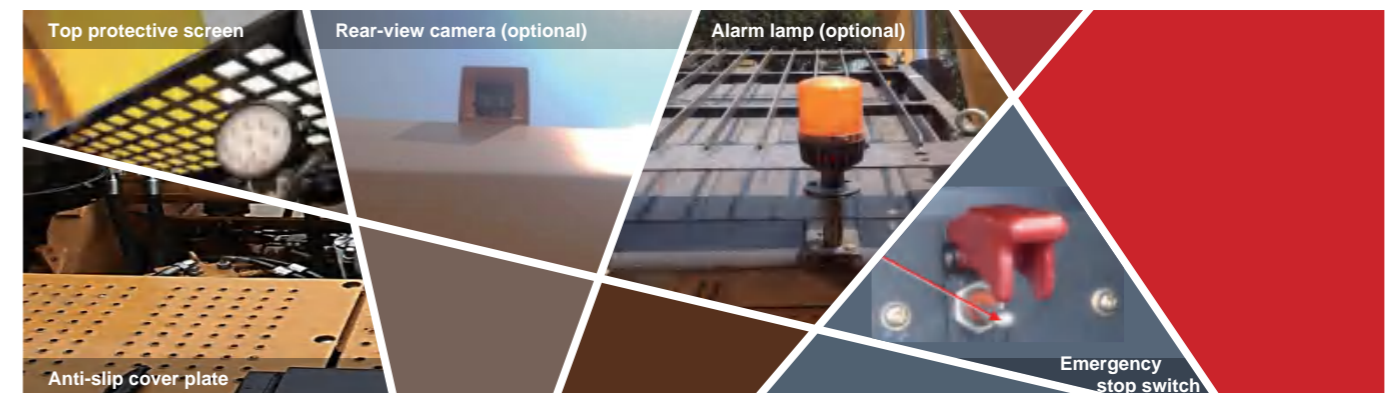


○ Safe and comfortable

In allusion to mining conditions, FOPS/ROPS cab and newly developed dust control & noise reduction technology are used so that the safety is improved by 5 times as compared with general cab. The noise in the cab is reduced by 5kB and is much better than that of other brands.



FOPS/ROPS cab is used. Through finite element modal analysis, steel structure and sealing performance of the cab are optimized; its strength is 5 times of general cab, the safety performance is extremely high and meanwhile the cab noise is reduced by 3-5dB, which makes the operation more comfortable.



Super long service life

Through the accumulation over 15 years, service life of SY550H exceeds 20,000h under mining conditions, and surpasses competitor brands with the help of initiative "three-dimensional" design test system for large-scale excavator.

Five major structural members

As compared with the product of previous generation, the service life of key structural members like boom, bucket rod, bucket, platform and undercarriage etc. is doubled

Hydraulic system

Delivery cleanliness of hydraulic system reaches NAS7 and is not only higher than competitor brands but also higher than industrial standard

Core components

Core components like main pump, main valve, oil cylinder and retarder etc. guarantee super long life



Key structural members

With most advanced international methods including optimization design of structural members, stress test, research of welds and plates, endurance test, 100% UT detection for key components and fatigue test for two axles, the service life of key structural members is improved comprehensively.



The boom adopts box-type structure with higher strength and is made of high-strength steel plates through advanced welding and molding process. The service life under mining conditions is **four times** of general boom.

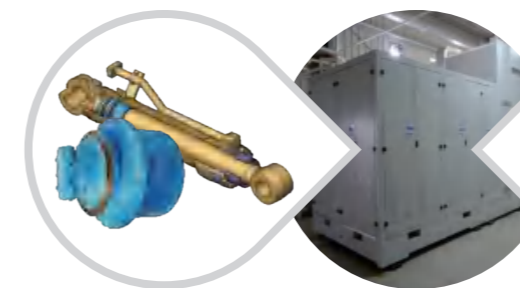
Bucket rod adopts bottom plate reinforcing bars and forging front support etc. As compared with competitor brands, the stress on main loading point is **30%** lower, and the service life is **30%** higher under mining conditions.

In allusion to the positions with concentrated stress such as oil cylinder connections and boom root etc., special welding process and protection structure are used. The stress on loading point is **20%** lower than the competitors.

Dedicated heavy-duty four-wheel & one-belt is used, and the service life is doubled. The guard plate is upgraded to multi-stage guard plate so that the service life is improved by **100%**.

Core Components

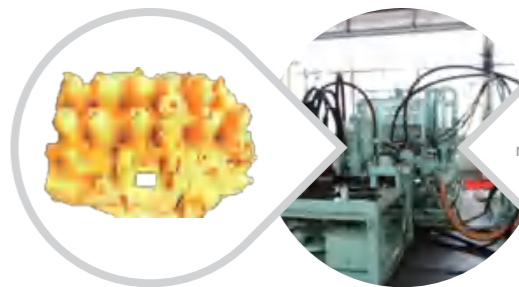
Relying on the only endurance test system for excavator parts in China, and through joint research with world famous research institutions, the research on service life of the parts is carried out for improving the service life of core parts comprehensively. The service life of components including pump, valve, oil cylinder, retarder, fuel tank and cab etc. is doubled.



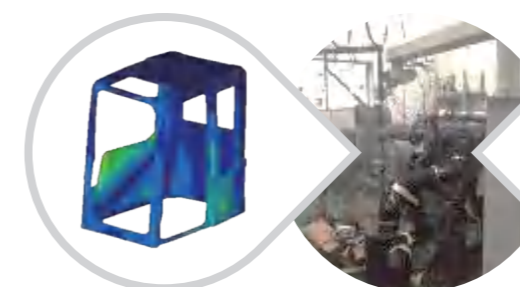
Hydraulic components like oil cylinder and retarder etc. must be subjected to impulse test according to the requirements higher than industrial standard. They can be put into operation only after reaching the requirements. Through this process, the service life of the components is **30%** higher than that of general brands.

Oil cylinder impulse test bench

Pump- valve test bench



With pump-valve endurance test bed, the service life of main pump and main valve are tested and analyzed. In combination with research achievements of long-life parts of the customer, the service life of the pumps and the valves is improved by **1 time**.



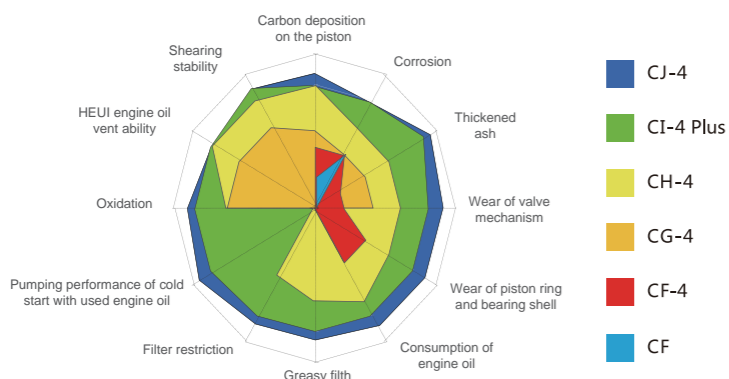
With vibration test bench, fuel tank and the cab has been tested by over hundreds of thousands of times on aspect of the vibration to improve the service life of the component by **50%**.

Vibration test bench

Super-low maintenance cost

Super-low maintenance cost

SANY is developing long-life engine oil, diesel oil filter and hydraulic oil jointly with professional manufacturers. Through two years' market verification, maintenance cost of the product is reduced by 50%, and maintenance interval is extended by 1 time;



Hydraulic oil: Service life of hydraulic oil is 4,000h and is extended by 1 time as compared with the competitor;
 Engine oil: Replacement interval is 500h and is extended by 1 time as compared with the competitor;
 Fuel filter element and engine oil filter element: Maintenance interval is extended from 250h to 500h;
 Hydraulic oil suction filter element: Maintenance interval is extended from 1,000h to 2,000h.

Super-easy management

Replacement space for maintainable parts is increased and the parts are designed in allusion to severe mining conditions for convenient maintenance. It is thus easier and simpler to manage the equipment. It is equipped with four-dimensional construction management system developed independently by SANY.

Air filter element

The space for replacing external air filter element is 30% larger than that of general excavator and the filter element can be replaced by 30% without the help of any tool.

30%

Engine compartment

Engine compartment volume is increased by 20% and electronic pump is added so that 20% of abnormal misfire can be solved rapidly

20%

Pump chamber

Pump chamber volume is increased by 30%, and the operating space for filter element replacement is increased by 20%

30%/20%



EEVIA
V2.20
Customer management system

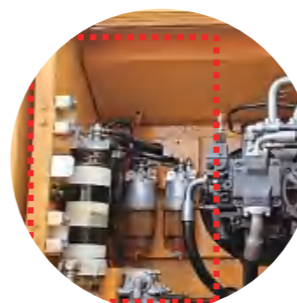
Maintenance convenience

In allusion to severe working conditions of the mine, the design of maintenance convenience of the maintainable parts is improved. "Big space, Easy to operate". Maintenance space for various maintainable parts increases by 20%-30% and makes the operation easier!



Easy to replace air filter element

Replace air filter element



Easy to replace diesel oil filter element

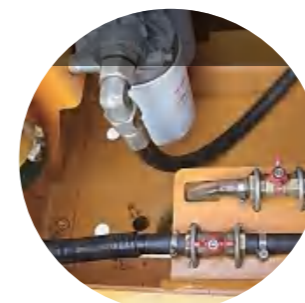
Replace diesel oil filter element



Easy to inspect engine oil; pump oil by one push after engine goes off abnormally

Inspect the situation of engine oil

Pump oil by one push after engine goes off abnormally



Engine compartment volume is increased by 20%, and water drain valve and diesel oil check valve are added

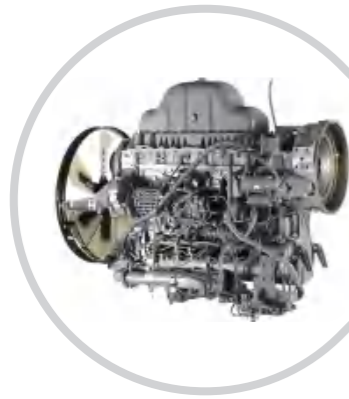
Engine compartment

Check valve

PRODUCT INTRODUCTION

○ Main configuration

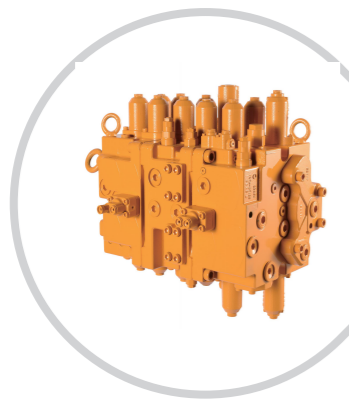
Core components like pumps, valves and engine etc. are designed jointly with proprietary intellectual property rights, and are manufactured by world famous manufacturers to ensure high quality and satisfy professional demands of SANY's customers.



6WG1X engine meets emission standard of national III and the displacement and the torque are generally 20% higher than competitor brands. It outputs high power and helps the customer to solve the operating difficulties of heavy-duty working condition.



32NA main valve is developed and designed according to customer requirements of SANY and has outstanding advantages including "high reliability, low pressure loss, high flow distribution efficiency and smooth compound control action". Its energy consumption is low and control performance is good.



212D main pump is parallel pump customized for SY550. As compared with traditional tandem pump, power output is improved by 10%, the arrangement is more compact and the maintenance is more convenient.



○ Construction case

Comments of the customer from Zhejiang Province on SY550H: In this mine, we use excavators of other brands on the surface layer and the second layer, and use SY550H on the third layer. Only SY550H can excavate the stonework on this layer!



Worksite: Changzhi, Shanxi Province
Working condition: Stonework (decomposed rock)
Operating type: crushing - excavation- loading
Work undertaken by SY550: crushing



Worksite: Xinyu, Jiangxi
Working condition: Ore
Operating type: crushing - excavation- loading
Work undertaken by SY550: crushing



Worksite: Deqing, Zhejiang Province
Working condition: Silicon ore
Operating type: crushing - excavation- loading
Work undertaken by SY550: crushing

Technical specifications

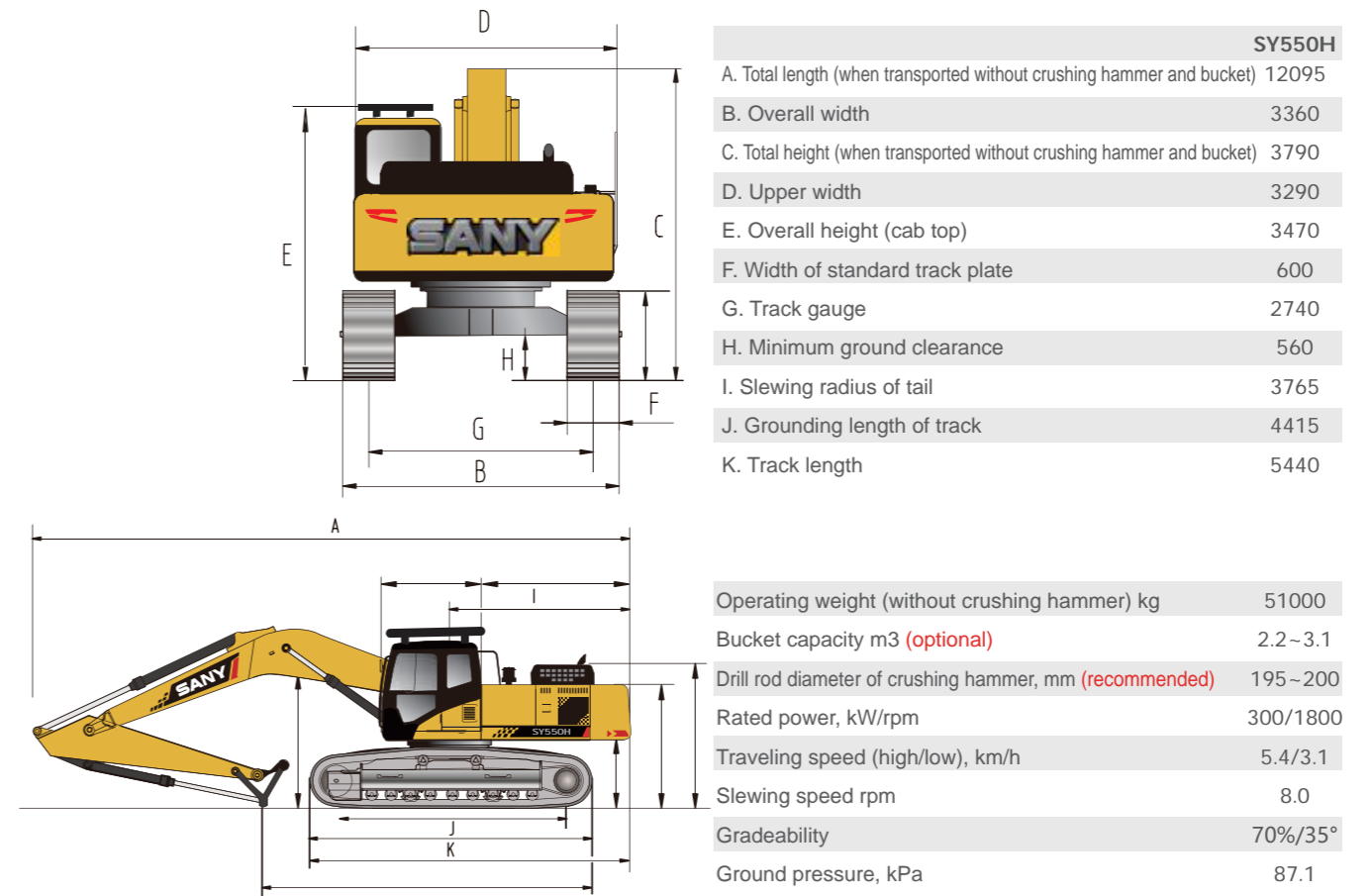
Specification		Main performance	
Overall weight	51000kg	Traveling speed (high/low)	5.4/3.1 (km/h)
Bucket capacity	2.2 ~ 3.1m ³	Slewing speed	8 rpm
		Gradeability	70% (35°)
Engine		Ground pressure	87.1kPa
Model	6WG1XKSC-01		
Type	Direct injection, 6-cylinder, 4-stroke, turbocharged, inter-cooling and water-cooled		
Rated power	300kW/1800rpm		
Maximum torque	1950Nm/1400rpm		
Displacement	15.681L		

Capacity of oil and coolant		Traveling part	
Fuel tank	680L	Number of track plates	50
Hydraulic oil tank	480L	Each carrier roller side	2
Engine oil	50L	Each thrust wheel side	9
Radiator	24L	Standard track	600mm
Final drive	2 × 15L		

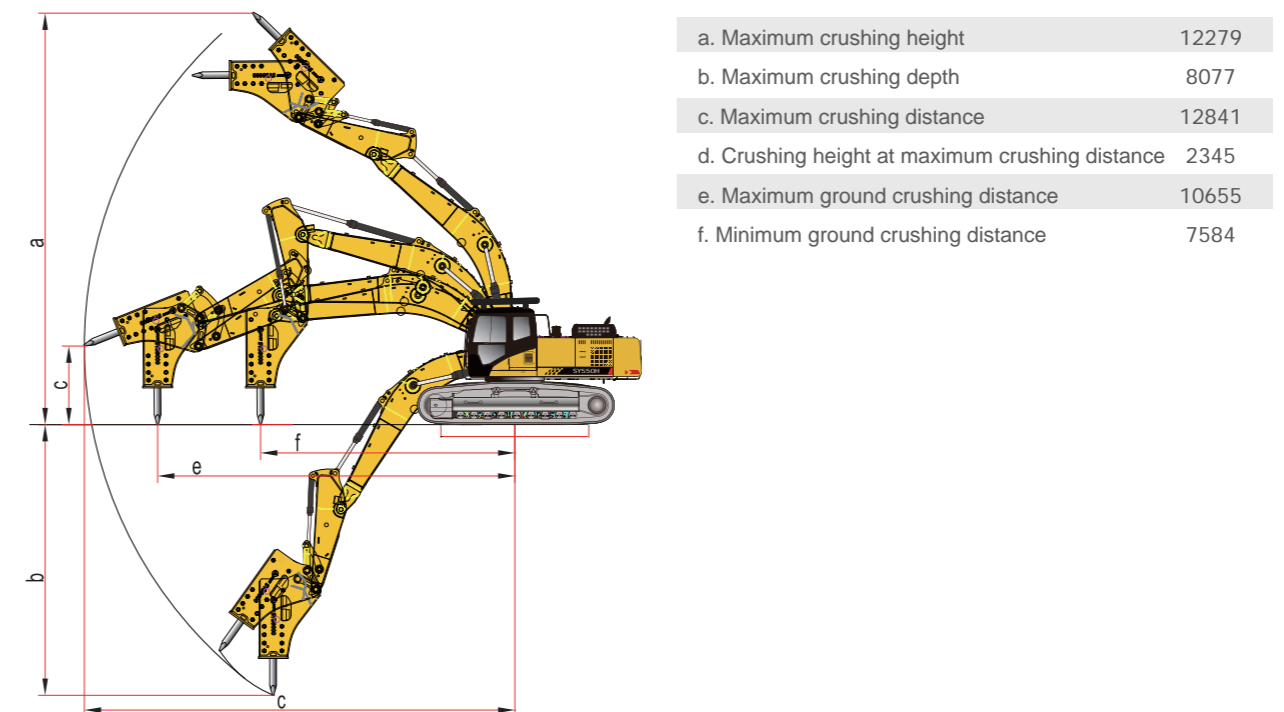
Boom---	7000mm	Bucket rod---	2500mm	Track width---	600mm	Counterweight---	9300Kg										
Table of Lifting Force at Front End of SY550 Bucket Rod								3.0m		4.5m		6.0m		7.5m		9.0m	
				Longitudinal	Lateral	Longitudinal	Lateral	Longitudinal	Lateral	Longitudinal	Lateral	Longitudinal	Lateral	Longitudinal	Lateral		
7.5m	Kg							*9614	*9614								
6.0m	Kg					*11056	*11056	*9901	*9901								
4.5m	Kg					*12694	*12694	*10664	*10664	*9714	*9714						
3.0m	Kg					*14405	*14405	*11560	*11560	*10084	*10084						
1.5m	Kg					*15603	*15603	*12312	11433	*10444	8992						
Ground	Kg					*16046	*16046	*12705	11245	*10546	8913						
-1.5m	Kg			*20260	*20260	*15760	*15760	*12559	11222								
-3.0m	Kg	*22921	*22921	*18517	*18517	*14631	*14631	*11454	*11454								
-4.5m	Kg			*15338	*15338	*11890	*11890										

They do not exceed 87% of hydraulic lifting capacity or 75% of tipping load.

Overall dimensions (mm)



Operating range (mm)





**Powerful Tool *SY550H*
for Mining Excavation
The King of Crushing**

**New-generation Super Hydraulic
Excavator for Mining**

