

## o Standard configuration

### Engine

- Isolated mounted engine
- Dynamic hunting mode control
- Radiator (with full protective screening)
- 24V/5.0kW starter motor
- 90A alternator
- Desert-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 aerofoil
- Automatic idling system

### Hydraulic system

- Control valve with main overflow valve
- Spare oil port of control valve
- Oil suction filter
- Oil drain filter
- Return oil filter
- Pilot filter
- Blanking pipe of hydraulic damper
- Independent oil radiator

### Slewing platform of superstructure

- Fuel oil level sensor
- Hydraulic oil level gauge
- Tool kit
- Slewing parking brake
- Rearview mirror (right)
- Rearview camera
- Cab warning 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)
- Multi-direction adjustable air-suspended 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 air conditioner
- Emergency stop switch
- Falling object protect structure and front protective screening

### Front-end working device

- Flange pin
- Welded connecting rod
- Central 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) as standard configuration
- 7" colored display screen
- EEVIA system
- Hour meter and 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 crawler guide mechanism
- Tensioning device of crawler
- Bolted driving wheel
- Thrust wheel and carrier wheel
- Reinforced caterpillar track with pin shaft seal
- 650mm double-rib crawler plate
- Reinforced side pedal
- Bottom cover plate

### Alarm lamp

- Controller failure
- Pump pressure abnormal
- Pilot pressure of various movements abnormal
- Power supply voltage abnormal
- Hydraulic oil temperature abnormal
- 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 carriage
- Manual grease gun
- Electrical diesel oil pump\*



- Rated power 377kW/1800rpm
- Operation weight 76200kg
- Bucket capacity 4.6m<sup>3</sup>

# SY750H

## Fully upgraded new-generation excavator

Brand new change **BRAND NEW**  
QUALITY CHANGES THE WORLD



SANY Heavy Machinery Co., Ltd.

SANY Industrial Park, Dongcheng Avenue, Kunshan Economic & Technological Development Zone, Jiangsu Province

○ Post code: 215300 ○ After-sales service hotline: 4008282318 ○ Consulting & complaint hotline: 4008879318 ○ [www.sanygroup.com.cn](http://www.sanygroup.com.cn)

**Note**

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# SY750H



## Powerful Tool for Mining Excavation Value Leader

New-generation Super Hydraulic Excavator for Mining

### SELLING POINTS

SY750H is the new-generation 70T-80T super-grade mine excavator product specially developed by Sany Heavy Machinery. It is specially designed for the heavy-duty operating conditions in mine, and aims to increase the investment return for customer. As compared with competing brands, it has the advantages such as "superior performance, super high adaptability, super high reliability, super humanized configuration and super low maintenance and management costs"



Superior performance



Super high adaptability



Super long service life

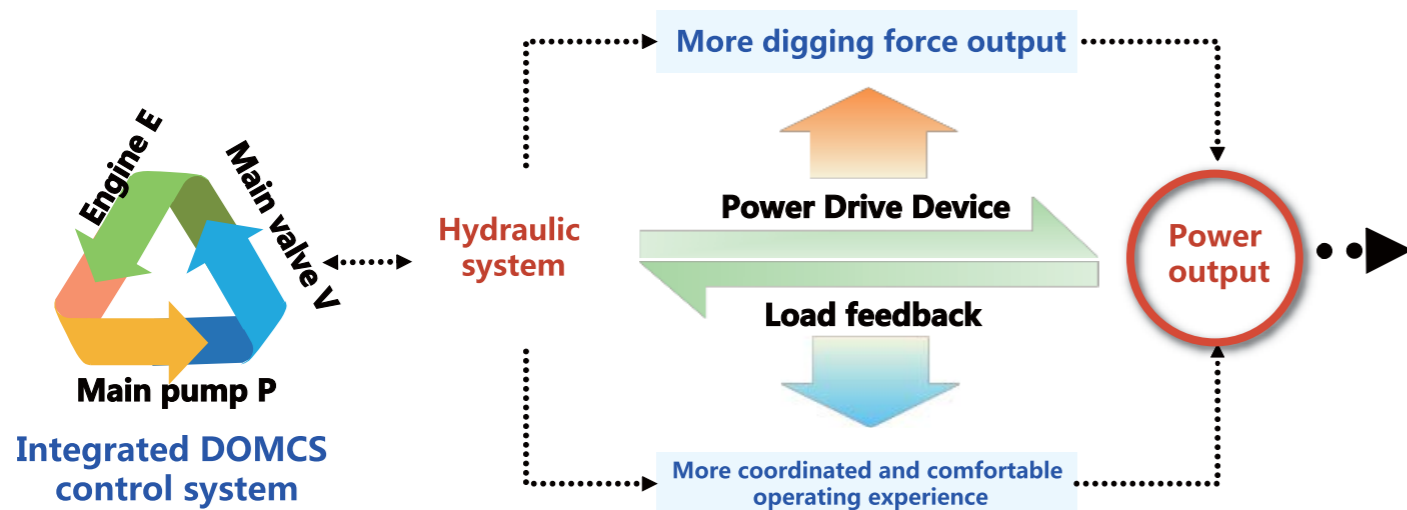


Super low maintenance cost

# SUPERIOR PERFORMANCE

## o Efficient 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.



Integrated DOMCS control system

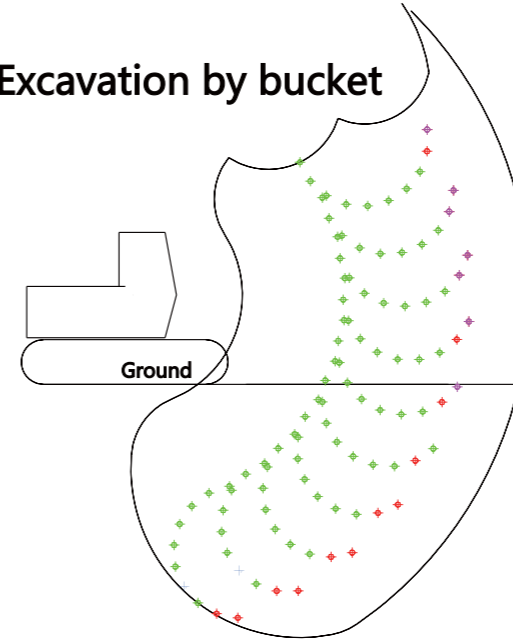
The Isuzu 6WG1X engine meets the national III emission standard, and is specially optimized and designed for Sany, so that the specific fuel consumption is reduced by 10%, and the power is 377KW, taking leading position among products of same tonnage;



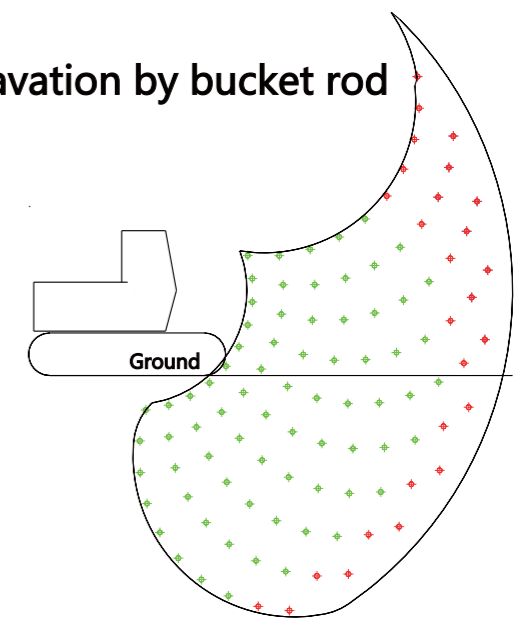
## o Big Mining Power

Through the real-time power adjustment in the whole process of excavation and the curve analysis for excavation force under various operating conditions, the excavation force can be brought into full play, and the efficiency can be improved by 40%. The green curve in the figure below indicates the excavation efficiency which is brought into full play, and the red curve indicates the excavation efficiency which is brought into partial play. Through the figure below, the excavation force of SY750H can be utilized by 90%.

Excavation by bucket



Excavation by bucket rod



## o Smooth Handling

With special handle, optimized valve core structure, regenerating channel and added intelligent interflow control etc. the pressure loss is reduced, operation coordination is improved and the equipment can be operated easily and smoothly.



An excavator operator who has more than 10 years' experience gave the comments for SY750H as follows:

The SY750H mine excavator has higher operation rate and higher excavation force than same-tonnage excavators under other brands, can act smoothly, and achieves the human-machine interaction, so that the driver will feel comfortable when driving it!

# HIGH ADAPTABILITY

By improving the safety and radiating capacity, adopting the high-efficiency large-capacity filtration system and corrosion-resistant coating and providing the crushing hammer pipeline as standard configuration, SY750H realizes the super high adaptability to environment, operating conditions and oil quality.

**High corrosion-resistant coating**  
With new coating system, service life of the paint is improved by **50%**

**Independent oil radiator**

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

**Desert-type Air Filter**

The extremely high dust filtration efficiency means the highly-dusty environment will be dealt with easily, the replacement of used oil will be avoided, the maintenance will be easy and the environmental pollution will be avoided.

**Large-capacity multi-stage Filtration System**

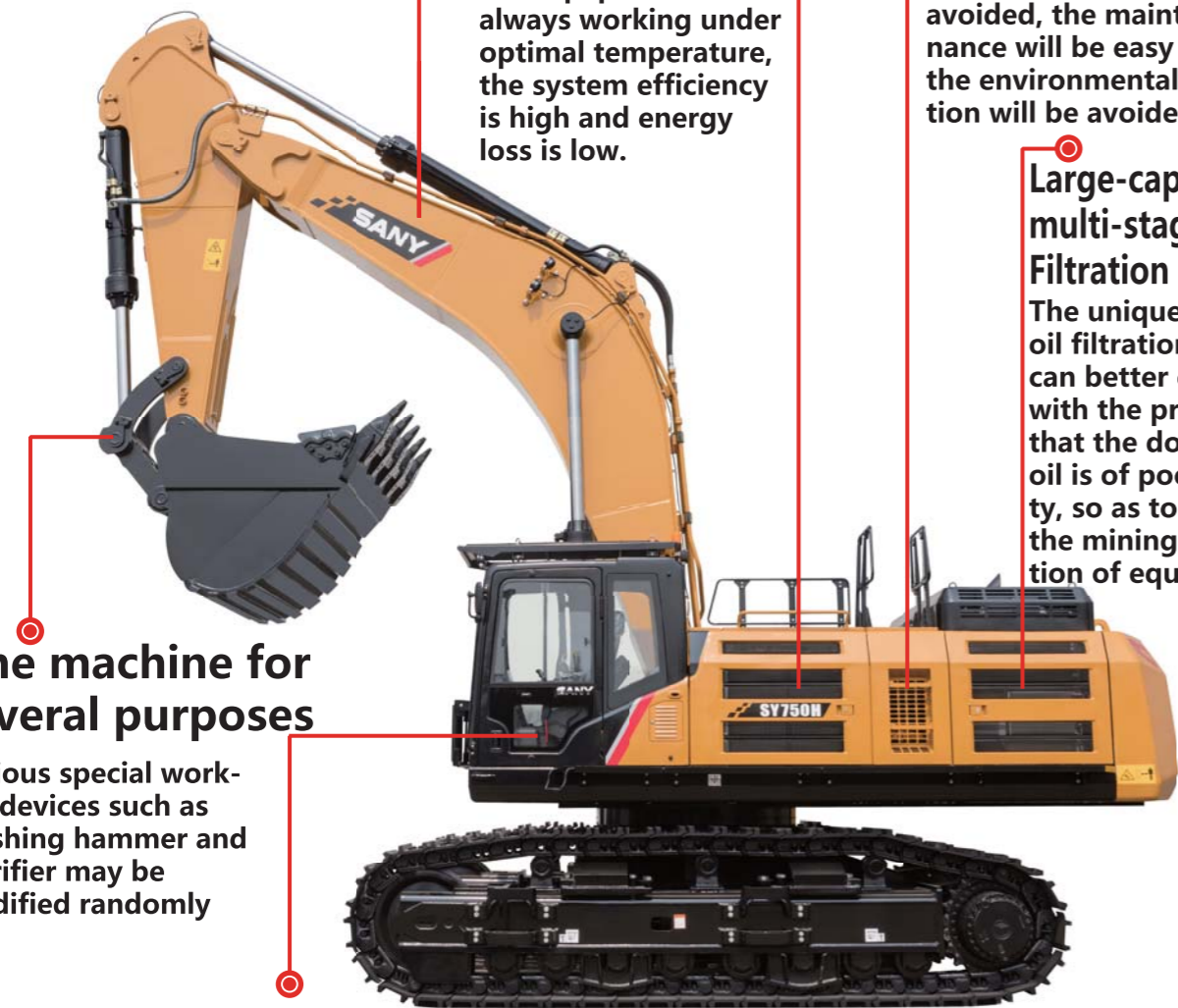
The unique diesel oil filtration system can better deal with the problem that the domestic oil is of poor quality, so as to ensure the mining operation of equipment

**One machine for several purposes**

Various special working devices such as crushing hammer and scarifier may be modified randomly

**Safe Cab**

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

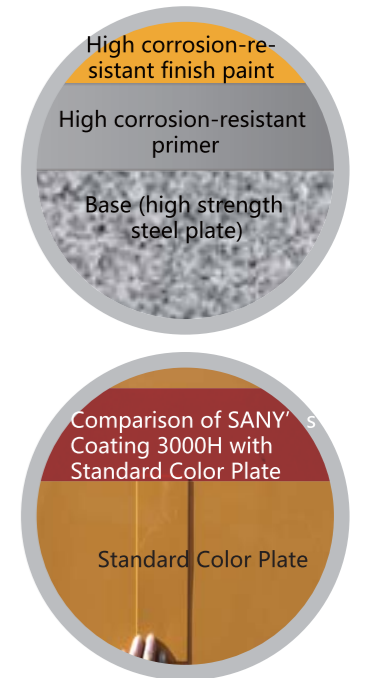
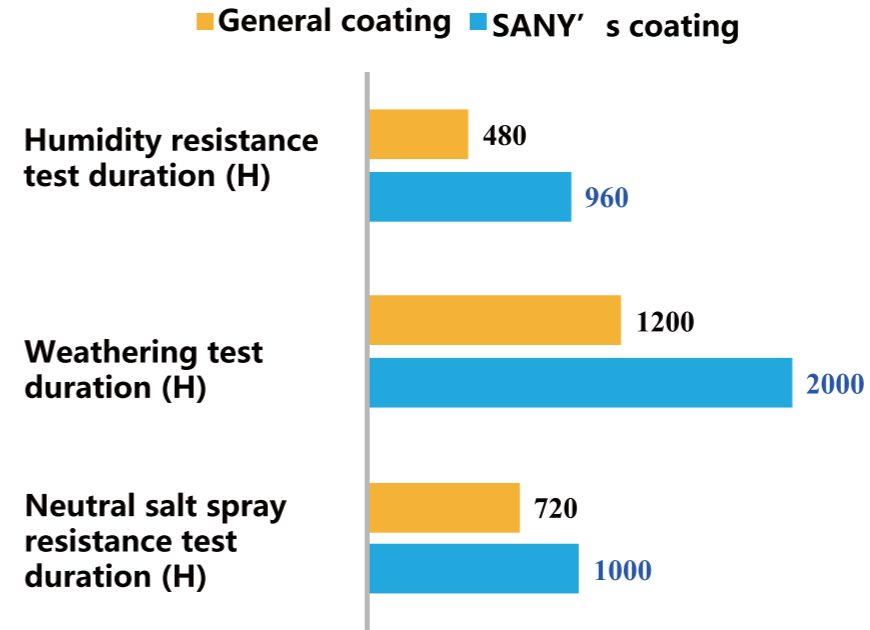


## High corrosion coating

By cooperating with world known paint brands, aging life of the paint reaches the level of competitor brands and the adaptability is improved by 40%

Coating distribution of SANY' s high corrosion-resistant paint

## Comparison of coating endurance test data

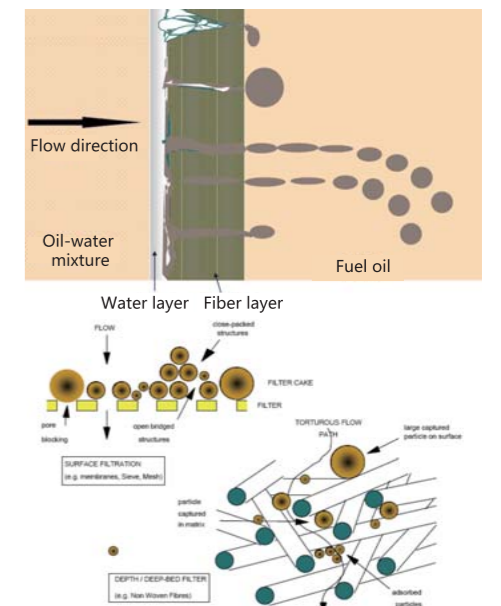


## High-capacity multi-stage filter system

Initiative large-capacity multi-stage filter system is introduced to cope with fuel oil of different quality levels, and meet emission requirements of national III standard. It provides top-level protection for the equipment!



High-capacity multi-stage filter system



Large-capacity multi-stage filter principle

## o Independent oil radiating system

The radiating efficiency is improved by 20%, the operating temperature of system is reduced by 8-10°C as compared with ordinary excavator, the adaptability to high-temperature environment is greatly enhanced, the service life of rubber parts is prolonged by 30%, and the energy consumption is reduced by 30% as compared with integrated radiation system.



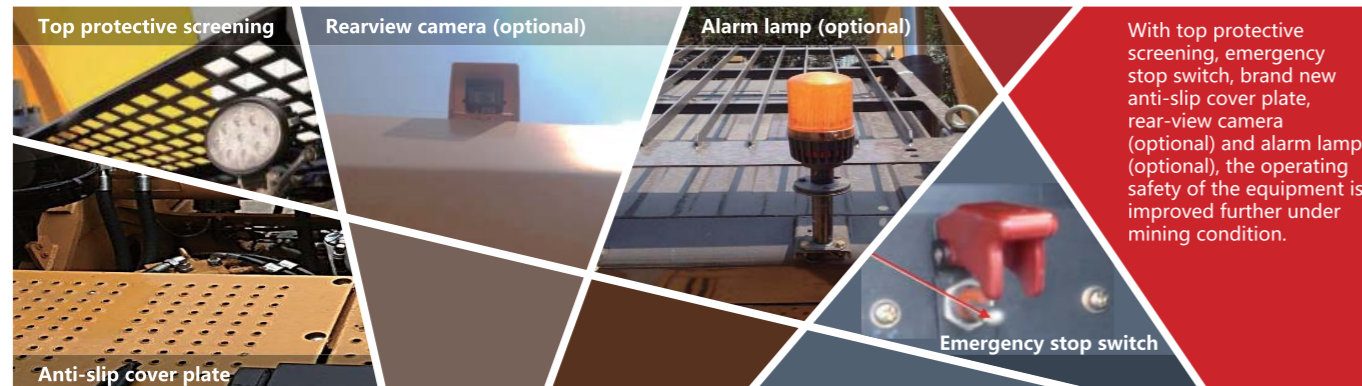
The right-angle plate-fin type fin is adopted, the area of air duct IS greatly increased, and the radiating efficiency is increased by 20% as compared with ordinary radiator; the pressure resistance of radiator is increased by 10%, and the service life is prolonged.

## o Safe and comfortable

In light of the operating conditions in mine, the safe cab and new-type dust-proof & noise-reducing technologies are adopted, so that the safety is increased by 5 times as compared with ordinary cab, and the noise in cab is reduced by 5dB. IN addition, the air-suspended seat is adopted, so that the driving comfortability is higher than other brands.



The safe cab is adopted, and through finite element modal analysis, the steel structure and sealing property of cab are optimized, so that its strength is 5 times that of ordinary cab and the safety is improved; the high-power air conditioning system is provided, so that the refrigerating and heating effect can be achieved quickly and the driving/riding will be more comfortable.



With top protective screening, emergency stop switch, brand new anti-slip cover plate, rear-view camera (optional) and alarm lamp (optional), the operating safety of the equipment is improved further under mining condition.

## o Multi-usage

In allusion to individual demands of the customer for this tonnage, this product may work with several working devices, and various modified products like extension boom etc. to improve the earning power of the customer.

### Configuration Table for SY750 Working Devices

Model	SY750H		Bucket capacity m <sup>3</sup>
Boom	7m		
Bucket rod	3m	2.57m	
Configuration situation	★	●	▲4.2
	●	★	▲4.6
	—	●	■5.4
Classification of bucket by use: ▲: bucket for stonework; ■: bucket for earthwork; ★ is recommended configuration while ● is optional configuration			

Example of special working device of SY750



# SY750S

# EXTENDED ENDURANCE

Through near 20 years' accumulation, by virtue of the three-in-one large-sized excavator testing system of Sany which is the first in China and on the basis of the matured technologies adopted for the product series, the designed service life of SY750H under operating conditions in mine exceeds 10,000 hours.

## Five major structural members

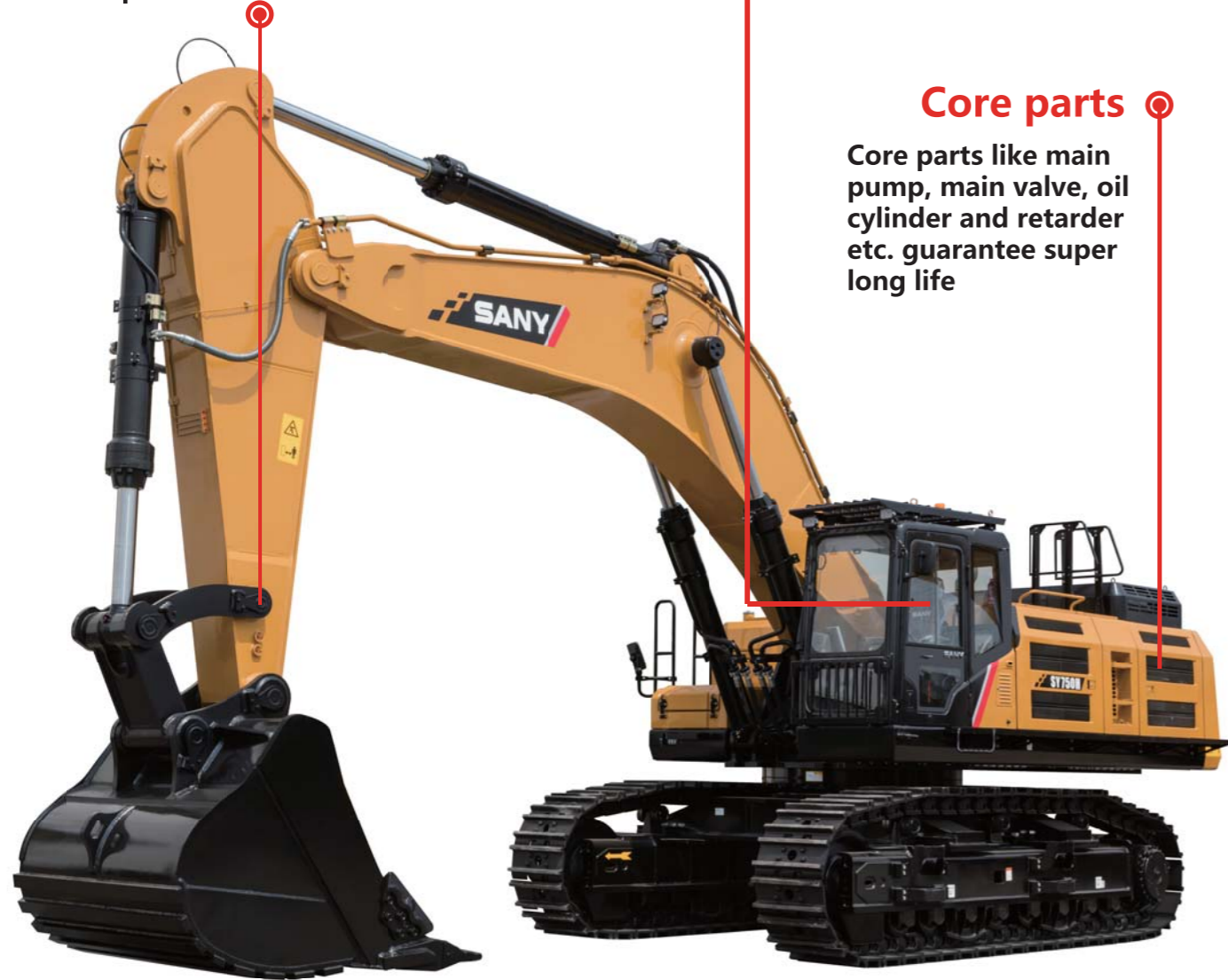
The working device and underframe are reinforced, the service life of structural parts is designed as more than 10,000 hours, and the base plate and teeth of bucket are reinforced

## Hydraulic system

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

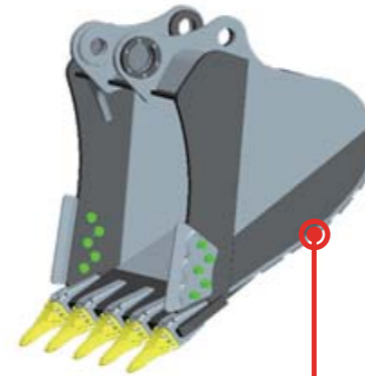
## Core parts

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

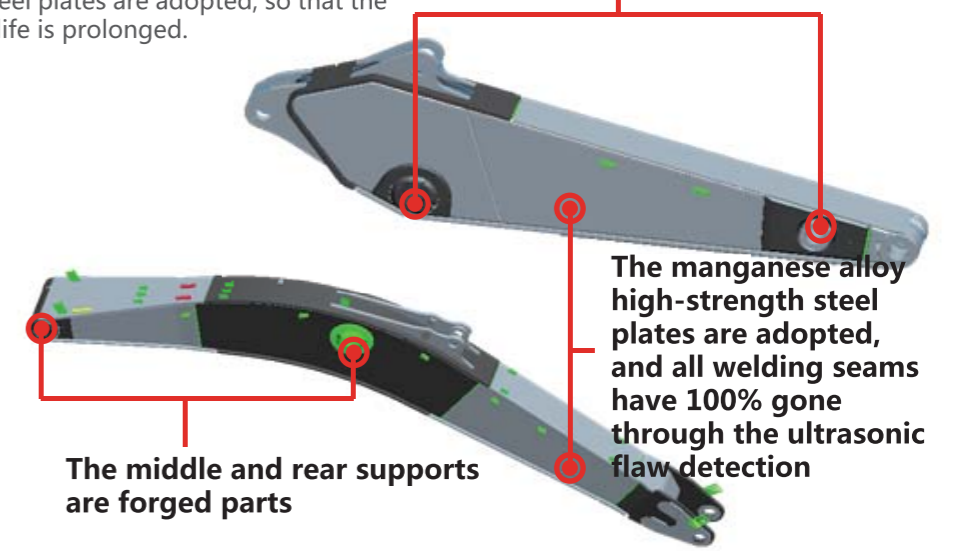


## The Key Structure

The side plate and flexible plate of bucket are made of NM400 anti-wear steel, so that the anti-wear property of bucket is improved; The main load-bearing components such as boom seat and bucket rod seat are forged parts, so that the overall structural strength is improved; The manganese-alloy high-strength steel plates are adopted, so that the reliability is improved and the service life is prolonged.



The anti-wear steel plates specially manufactured by Sany are adopted



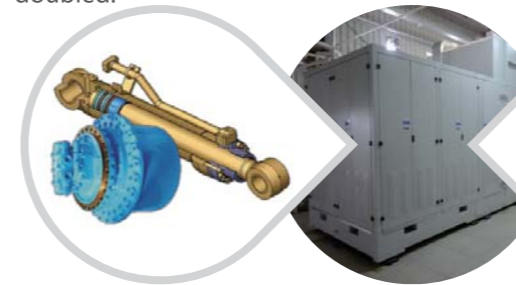
The middle and rear supports are forged parts

The front and rear supports are forged parts

The manganese alloy high-strength steel plates are adopted, and all welding seams have 100% gone through the ultrasonic flaw detection

## The Core Components

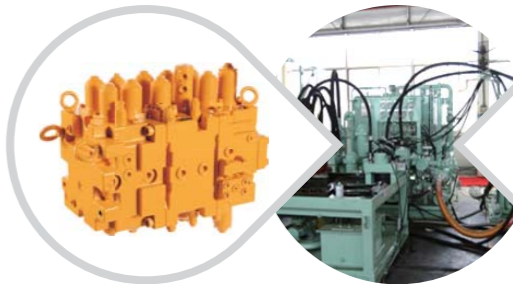
Relying on the only endurance test system for excavator parts in China, and through joint research with world famous research institutions, the research on service life of the parts is carried out for improving the service life of core parts comprehensively. The service life of components including pump,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



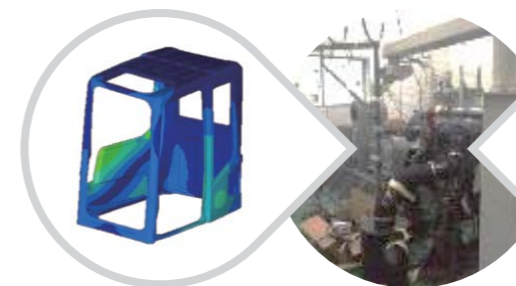
Hydraulic components like oil cylinder and retarder etc. must be subjected to impulse test according to the requirements higher than industrial standard. They can be put into operation only after reaching the requirements. Through this process, the service life of the components is 30% higher than that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

Oil cylinder impulse test bed

Pump- valve test bed



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.



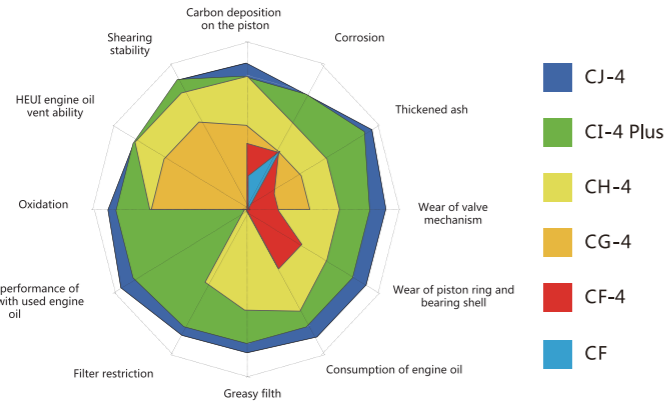
With vibration test bench and test bed, fuel tank and the cab has been tested by over hundreds of thousands of times on aspect of the vibration to improve the service life of the component by 50%.

Vibration test bench and test bed

# LOW MAINTENANCE COSTS

## 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; as compared with competitor brands, the maintenance cost is reduced by 40%.



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 to management

Four-dimensional construction management system independently developed by SANY is equipped to improve maintenance convenience of maintainable parts, and convenient maintenance design in allusion to severe mining conditions makes equipment management easier and simpler.



### Air filter element

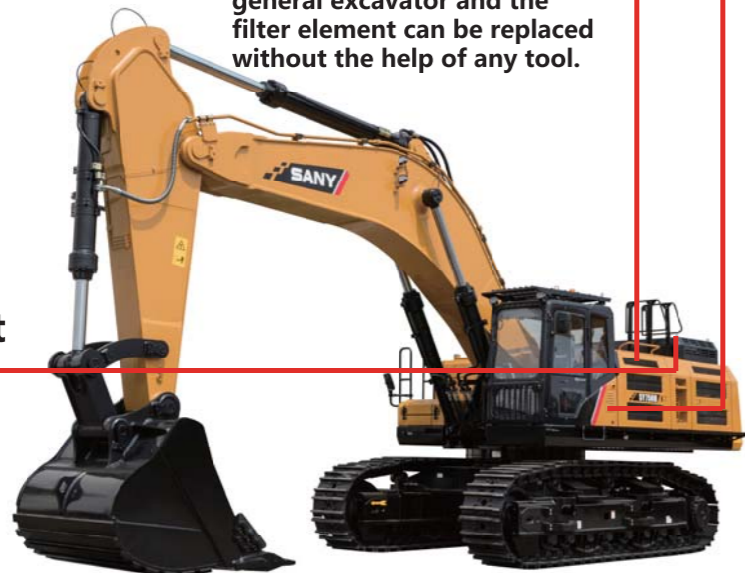
The space for replacing external air filter element is 30% larger than that of general excavator and the filter element can be replaced without the help of any tool.

### Pump chamber

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

### Engine compartment

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



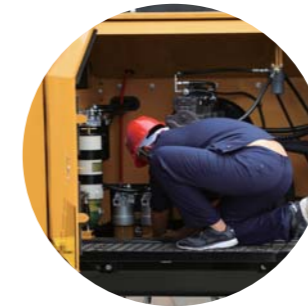
## Maintenance convenience

In allusion 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!



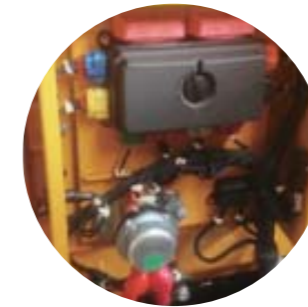
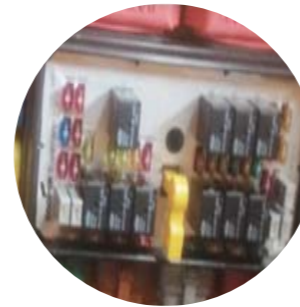
Easy to replace air filter element

Replace air filter element



Easy to replace diesel oil filter element

Replace diesel oil filter element



Electronic control cabinet out of the cab makes the maintenance convenient

Independent electronic control cabinet



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

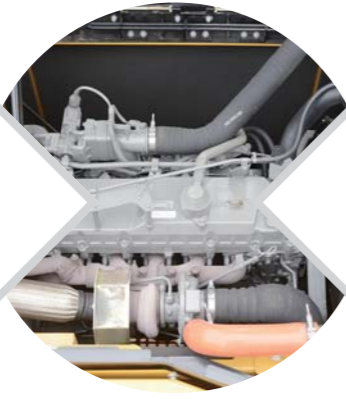
Engine compartment

Water drain valve and check valve of fuel tank

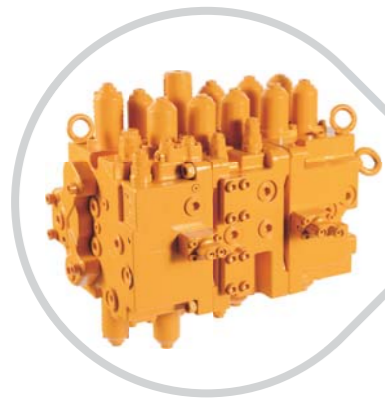
# PRODUCT INTRODUCTION

## ○ Main configuration

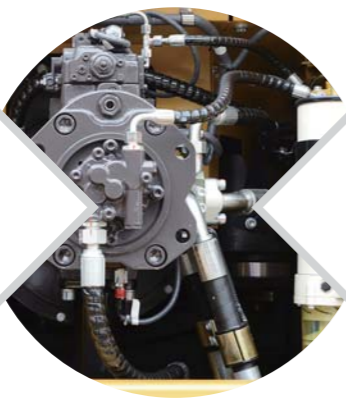
Core components like pumps, valves and engine etc. are designed jointly with proprietary intellectual property rights, and are manufactured by world famous manufacturers to ensure high quality and satisfy professional demands of SANY' s customers



The Isuzu 6WG1X engine which meets the national III emission standard is adopted and optimized by Sany, so that the specific fuel consumption is reduced by 10% and the power reaches 377KW, taking lead among same-tonnage products.



The Kawasaki KMX36NA main valve which enjoys leading position in the industry is adopted, and its flux capacity is increased by 25% as compared with 32NA main valve. Through one-year adjustment by Sany and Japanese experts, the coordination exceeds all other products.



The Kawasaki K3V280 main pump is fully upgraded to electrically-controlled positive flow control type, which can fully utilize the flow and ensure that the flow will be provided as needed, and, as compared with negative flow system, can reduce the loss caused by middle-position reflux, increase the response speed and reduce the capacity loss.

## ○ Working Case

A customer gave the comments for SY750H as follows: "Many 70-ton or 80-ton excavators that we used before are not as fast as it; nowadays the use of explosives is prohibited, and SY750H is directly used to carry out excavation in many places. It can carry out excavation in any place where other machines can't carry out excavation."



Worksite: He County, Anhui  
Working condition: Ore  
Operating type: excavation- loading  
Work undertaken by SY750: Stone stripping, and loading



Worksite: Hangzhou-Shaoxing-Taizhou Expressway  
Working condition: Rock  
Operating type: excavation- loading  
Work undertaken by SY750: Stone stripping, and loading



Worksite: Zhenjiang, Jiangsu  
Working condition: Stonework (decomposed rock)  
Operating type: excavation- loading  
Work undertaken by SY750: Stone stripping, and loading



## Technical specifications

Specifications		Main performance	
Total weight	76200kg	Traveling speed (high/low)	4.5/2.9 ( km/h )
Bucket capacity	4.6m <sup>3</sup>	Slewing speed	7.3rpm
		Gradeability	70%/35°
Engine	Isuzu	Ground pressure	110kPa
Model	GB3-6WG1X-377-1800	Digging force of bucket	402kN
Type	Direct injection, 6-cylinder, 4-stroke, turbocharged, inter-cooling and water-cooled	Digging force of bucket rod	345kN
Rated power	377kW		
Maximum torque	2138/1500Nm		
Displacement	15.681L		

Capacity of oil and coolant		Traveling section	
Fuel tank	940L	Number of crawler plates	47
Engine oil	42~57L	Carrier wheel on each side	3
Cooling system	70L	Thrust wheel on each side	8
Final drive	2×20L	Standard crawler	650mm

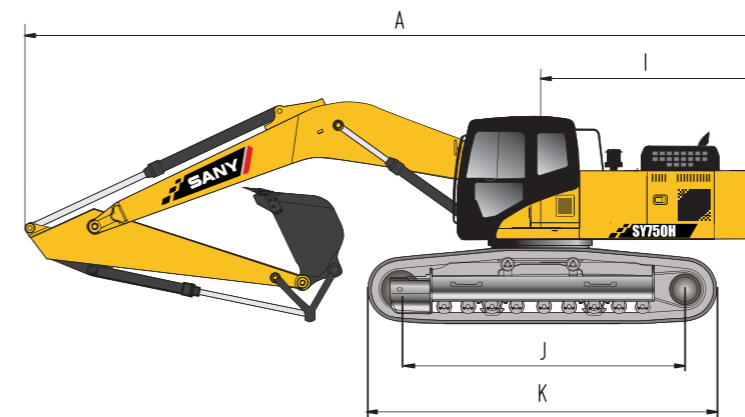
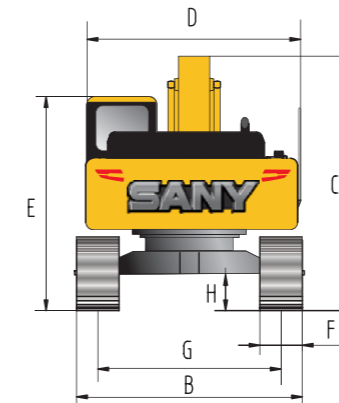
Boom--	7000mm	Bucket rod--		Width of crawler--				Counter weight--			
		3000mm	3000mm	650mm	650mm	650mm	650mm	11000Kg	11000Kg		
		3.0m	4.5m	6.0m	7.5m	9.0m					
		Longitudinal	Transverse	Longitudinal	Transverse	Longitudinal	Transverse	Longitudinal	Transverse		
7.5m	kg							*16937	*16937		
6.0m	kg			*31260	26514	*17778	*17778	*16459	*16459		
4.5m	kg			*23021	*23021	*19131	*19131	*16948	*16948		
3.0m	kg			*25656	*25656	*20538	*20538	*17600	15061		
1.5m	kg			*27281	*27281	*21560	*21560	*18059	14725		
Ground	kg			*29459	*29459	*27550	*27550	*21853	18609	*17978	14524
-1.5m	kg	*21665	*21665	*33823	*33823	*26471	*26471	*21120	*21120		
-3.0m	kg	*36689	*36689	*29873	*29873	*23825	*23825	*18745	*18745		
-4.5m	kg			*23394	*23394	*18491	*18491				

1. The lifting capacity is calculated in accordance with ISO10560 and SAEJ1097, where limit coefficient of hydraulic system is 0.87 and tilting limit coefficient is 0.75;

2. The item with the mark \* is limited by hydraulic pressure and the item without the mark "\*" is limited by stability;

3. Lifting point is front support hole of bucket rod (excluding the weight of bucket). It is necessary to deduct from the above lifting capacity if additional accessory is installed such as bucket etc.;

## Machine dimensions (mm)



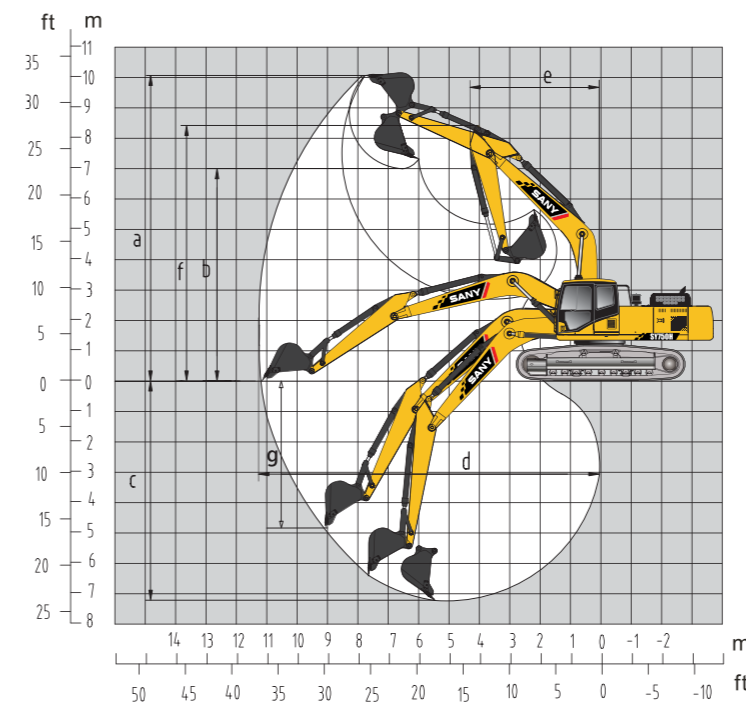
### Overall dimensions: mm SY750H

A. Overall length (in transportation state)	12865
B. Overall width	4320
C. Overall height (in transportation state)	4855
D. Upper width	3460
E. Overall height (cab top)	3800
F. Width of standard crawler plate	650
G. Track gauge	3380/2780
H. Minimum ground clearance	880
I. Slewing radius of tail	4220
J. Ground contact length of crawler	4650
K. Crawler length	5865

### Performance parameters SY750H

Total weight, kg	76200
Bucket capacity m <sup>3</sup>	4.2
Rated power, kW/rpm	377/1800
Traveling speed (high/low), km/h	4.5/2.9
Slewing speed rpm	7.3
Gradeability	70%/35°
Ground pressure, kPa	110
Digging force of bucket, kN	402
Digging force of bucket rod, kN	345

## Operating range (mm)



### Operating range: mm SY750H

a. Maximum digging height	11200
b. Maximum unloading height	7250
c. Maximum digging depth	7620
d. Maximum digging depth with vertical boom	4320
e. Maximum digging distance	12050
f. Minimum slewing radius	5520
g. Maximum height at minimum slewing radius	9780



# Powerful Tool for *SY750H* Mining Excavation Value Leader

New-generation Super Hydraulic  
Excavator for Mining

