

Standard and optional equipment may vary by country, so please consult your Hitachi dealer for details.

(*) No alarm, only indication

S : Standard equipment

O: Optional equipment

ENGINE	
Auto idle system	S
Cartridge-type engine filter	S
Dry-type air double filter with evacuator valve (with air filter restriction indicator)	S
Cartridge-type engine oil filter	S
Cartridge-type fuel filter	S
Mode control (WR(Power) ECO(Economy))	S
Isolation-mounted engine	S
Pre-cleaner	S
Radiator, oil cooler	S
Radiator reserve tank	S
50 A alternator	S

HYDRAULIC SYSTEM	
Drain filter	S
Engine speed sensing system	S
E-P control system	S
Pilot filter	S
Power boost	S
Quick warm-up system for pilot circuit	S
Shockless valve in pilot circuit	S
Suction filter	S
Work mode selector	S

CAB	
Adjustable armrests	S
Sound suppressed	S
Steel cab	S
AM-FM radio	S
Auto control air conditioner	S
Auto-idle selector	S
Drink holder	S
Engine shut-off cable	S
Floor mat	S
Front window washer	S
Windshield wiper	S
Pilot control shut-off lever	S
2 Point Seat Belt	S
Rubber radio antenna	S
Seat : Adjustable reclining mechanical suspension	S
Short wrist control levers	S
Storage box	S
Front Guard-Top	O
Front Guard-Bottom	O
2 speaker	S
6 fluid-filled elastic mounts	S
Mobile charger	S
Sunvisor	S

MONITOR SYSTEM	
Alarm buzzers: overheat, engine oil pressure	S
Alarms: overheat, engine warning, engine oil pressure, alternator*, minimum fuel level, air filter restriction*	S
Display of meters: water temperature, hour mode, fuel gauge	S
Other displays: work mode, auto-idle	S

LIGHTS	
3 working lights	S
2 cab lights	S

UPPER STRUCTURE	
Electric fuel refilling pump with auto stop	S
Rear view mirror(right & left side)	S
Side walk (cab side)	S
Swing parking brake	S
Tool box	S
Utility space	S

UNDERCARRIAGE	
Bolt-on sprocket	S
Full track guard	O
Hydraulic track adjuster	S
Idler track guard	S
Travel motor covers	S
Travel parking brake	S
Upper and lower rollers	S
600 mm triple grouser shoes	S

FRONT ATTACHMENTS	
Automatic centralized lubrication system (except arm front end joints)	S
Damage prevention plate	S
Square bars	S
Dirt seal on all bucket pins	S
1.9 m ³ (ISO heaped) bucket (granite bucket)	O
3.1 m ³ (ISO heaped) G.P bucket	O
3.0 m ³ (ISO heaped) G.P bucket	O
2.5 m ³ H.D Bucket	O
2.6 m ³ Bottom drum type backhoe	O
6.3 m BE-boom	S
2.5 m BE-arm	S
2.9 m BE-arm	O
7.0 m Boom	S
7.0 m Arm	S

MISCELLANEOUS	
Anti-slip steps and handrails	S
Lockable fuel refilling cap	S
Lockable machine covers	S
Onboard information controller	S
Standard tool kit	S

OTHERS	
Global e-service	S
ConSite	S



ZAXIS 470H



HYDRAULIC EXCAVATOR

Model Code	: ZX 470H
Engine Rated Power	: 235 kW (315 HP)
Operating Weight	
Backhoe	: 47 100 kg
Loading Shovel	: 47 500 kg
Bucket Capacity	
Backhoe ISO Heaped	: 1.9 m ³ - 3.1 m ³
Loading Shovel ISO Heaped	: 2.6 m ³

The Specifications are subject to change without prior notice. The machine depicted may vary from the actual machine. Please contact our nearest office for latest specifications. Accessories shown here are not part of the standard equipment. Performance of the machine may vary with site and operating conditions encountered.

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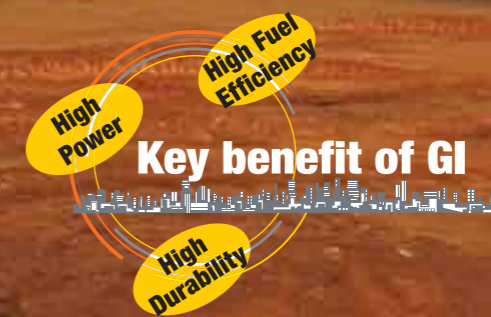
NEW ZAXIS *Now, with the Power of GI*

The ZAXIS hallmark – industry-leading hydraulic technology, and performance no other can beat. The New ZAXIS-GI Series Excavators provide reliable solutions: impressive fuel economy, swift front attachment movements and easy operation. Another highlight of the new ZAXIS series is the optimized hydraulic system and engine which is the result of Hitachi's technological prowess and expertise.

The New ZAXIS-GI Series features the key benefits of high power, excellent fuel efficiency and high durability, all of which serve to ensure best in class performance and lowest running costs.

New, Improved

- ◆ New bucket design for overburden
- ◆ New Hitachi controller for improved performance
- ◆ New pilot lever for operator's comfort
- ◆ Fuel feed pump as standard feature
- ◆ New 2.9m arm with 3m³ bucket



High production with less fuel

Page 4-5

- New modified bucket
 - Higher digging forces
 - Advanced controller
 - Faster swing speeds
- All the above ensures, higher production with optimum fuel efficiency



"No compromise on operator comfort"

Page 8-9

- Large roomy cabin
- Enhanced visibility
- User friendly functionality, safe cabin
- Better legroom
- Enjoy your work



Global e service

Page 13

- Easy access to on-site machine through internet
- Reports in usable forms for analysis



Pursuits of performance and durability

Page 6-7

- Durable parts
- Environment friendly EPA Tier II engine
- Rock solid front attachment
- Strengthened undercarriage
- Proven superstructure



Simplified maintenance

Page 10-11

- Easy access
- Easy servicing
- Easy cleaning
- Quick lubrication
- Large capacity fuel tank
- Low life cycle costs



Higher Production with Less Fuel

Higher level of performance

Customers around the world told us that the ideal large excavator results in higher production. So our engineers used the latest techniques to create the new generation of Tata Hitachi large excavators.

The new hydraulic system allows the operator to manoeuvre the machine easily and perform smooth combined operations, whether the machine is digging or loading a dump truck.

The front speed is optimised by reducing the pressure loss in circuits and the swing torque has increased by 9% compared to ZAXIS450H. The speed of light-load operations such as grading has also been improved due to larger volume of hydraulic flow.

Lower fuel with higher production

The success of any business is influenced by the productivity and efficiency of the equipment. Ultimately, the investment in Tata Hitachi machines can help to meet production targets and compete successfully to win tenders.

In PWR mode, the ZAXIS470H uses less fuel, while increasing the productivity as the ZAXIS450H model in the same mode (power)*. All modes therefore result in faster operation, with lower fuel consumption.

Sustainable efficiency

The sustainable development of the Tata Hitachi product range to minimise impact on the environment continues to be one of our main priorities.

To reduce emissions, prevent fuel wastage and ensure lower noise levels in the cab, the ZAXIS470H has an Auto Shut-down feature. This automatically drops the engine revolutions to low-idle and then stops the engine after the pilot shut-off lever has been raised.

◆ New bucket for overburden

The New ZX470H is equipped with a specially designed bucket for Over Burden (OB) removal.

This bucket offers better bucket fill and heap, has ease of scooping OB and lesser efforts in filling the bucket. All this ensures faster cycle time and higher trips per hour of haulers and hence higher productivity.



Powerful efficiency

The new ZAXIS470H is equipped with a powerful new-generation engine, which delivers higher productivity with greater fuel efficiency. The new engine has fuel injection system, which delivers the precise quantity of pressurised fuel to achieve effective combustion and reduces fuel consumption and particulate matter.

The HIOS IIIB hydraulic system has also been applied to the new ZAXIS 470H to reach higher yields with better fuel consumption than the previous model.



Pursuits of Performance and Durability

Durable parts

Our large excavators have been designed to deliver increased levels of productivity even on the toughest job sites. The aim behind manufacturing such durable machines is to ultimately ensure a lower cost of ownership for customers. The strengthened boom and arm on the new ZAXIS470H are highlights of the machine's enhanced durable characteristics. Both features allow it to cope well with working long hours in rugged environments.

A filter-type high-performance water separator effectively captures moisture in the fuel, reducing impurities and help minimise any fuel-related engine problems. Dual fuel main filters and pre-filters are provided as standard on the ZAXIS470H to reduce fuel system failures.

The fuel injector is protected by diamond-like carbon (DLC) coating, which enhances its reliability and durability, and the engine has a twin-layer fuel main filter that doubles filtration performance.



Environment friendly EPA Tier II engine

This EPA Tier II engine has a track record showing impressive durability at countless tough job sites around the world. The engine has a rugged design, a direct fuel injection system and governor.

A simple cooling system, consisting of a radiator and oil cooler, facilitates smooth cooling air flow for improved cooling efficiency. The combination of a 235 kW (315 HP) engine and the new HIOS IIIB hydraulic system meets requirements, in terms of both output and fuel consumption.



Rock solid front attachment

The new ZAXIS adopts the boom and arm used for heavy-duty versions of the conventional ZAXIS series standard models to increase the strength, allowing it to function optimally at tough job sites such as mines, quarries, stone, granite, where an endless stream of operations are required. It also has a wide application scope by using a bucket for civil engineering work or one for quarrying, depending on the intended use.

The arm cylinder, boom cylinders and bucket cylinder for the retract side cushion shocks at the stroke ends to reduce noise and extends the service life.

Strengthened undercarriage

The new undercarriage is an integral construction, the track center and side frame of which are welded together. The lower center of gravity of the body improves stability. For idler brackets, where stress is concentrated in transit, the box-structure and reinforcing plates limit deformation and enhance travel stability. An enhanced two step side step ladder is also provided to facilitate entering/alighting from the cab.

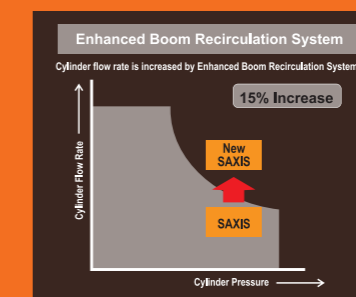
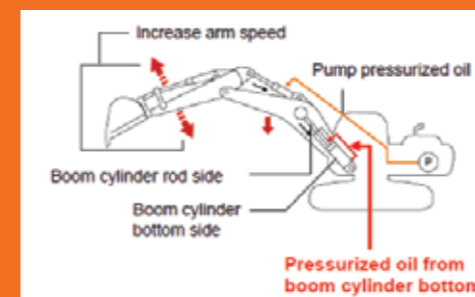
Proven superstructure

The upperstructure frame is reinforced with the proven D-section skirt to increase rigidity against damage by obstacles. A large door catch is added to reduce shocks and jolts of the cab and upperstructure.

Advance hydraulic system

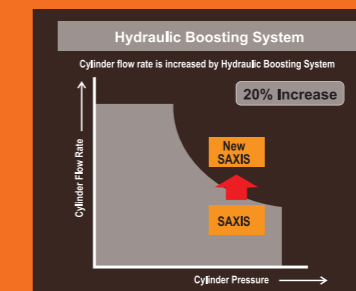
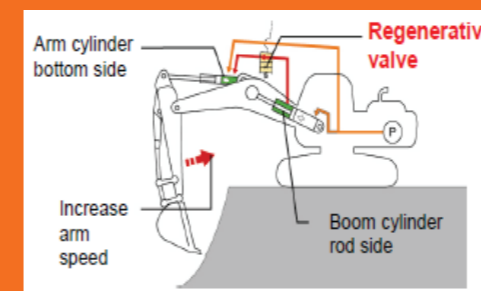
The Advanced Hitachi controller has been installed, after rigorous testing at Hitachi Japan and then in India to ascertain that it is perfect for Indian site conditions and delivers best results of productivity and fuel consumption.

Boom Re-Generation Circuit



Faster combined operation of boom lower and arm roll-in due to boom cylinder oil being directed from cylinder bottom side to rod side.

Hydraulic Boosting System



The regeneration circuit uses the return flow from the hydraulic cylinders for energy saving. Concept of Gravity is used in lowering the attachments without Hydraulic pump flow, thus resulting in fuel saving. Hydraulic Boosting system increases the forces at the arm and bucket cylinders, thus resulting in better productivity.

No Compromise on Operator Comfort

Large roomy cabin

It's essential for you to feel comfortable while you work, especially if you are operating an excavator for lengthy periods of time in a mining/quarry or large-scale construction site. We had reviewed the ergonomic design of the ZAXIS470H excavator cab to ensure that you can complete your shift with ease and enjoy the rest of your day.

The fully adjustable air-suspension seat absorbs vibrations and helps to minimise operator fatigue. Its new sliding mechanism means that it can be moved back further than ever before. More leg room is also available as the space underneath the monitor has been expanded. The pressurized cab keeps dust and particles from entering. Multiple air vents for the air conditioner are located strategically for uniform air circulation inside the cab.

Enhanced visibility

Health and safety are of paramount importance in busy quarries and construction sites. With the latest innovations, the new ZAXIS470H offers enhanced visibility, particularly on the right-hand side of the machine, to help you avoid any unnecessary damage, and ultimately save you time and money. The monitor and door have been repositioned, which improves your view and provides easier access to the cab. The excavator is also equipped with the latest rear-view camera (optional), giving you a broader visual range. The cabin is equipped with a sunvisor for clear view and comfort of operator.



Enjoy your work

By creating a relaxed and pleasant workspace, our aim was to make your day in the cab of the new ZAXIS more enjoyable and therefore more satisfying. If you enjoy listening to the radio as you work, you will find that the controls for the AM/FM stereo radio are now fully adjustable from the monitor. Alternatively, if you wish to plug in a USB, that facility is also provided to the sound system, so that you can work smoothly and efficiently to your favourite music.



Smooth operations

New smooth pilot lever for ease of operation and operator comfort ensures a non-stop production without operator fatigue.



User-friendly functionality

The advance technology that is incorporated with in the new ZAXIS is one of its many advantages. The ergonomic controls and easy to view monitor place the power firmly in your hands. The new LCD monitor which displays a comprehensive range of useful technical information allows you to check the machine status and settings at a glance. For easy operation, the monitor and ergonomically designed switches have been repositioned and are both conveniently located on the right hand side of the cab. FOPS (Falling Object Protection System) cab complying ISO 3449 level-I is standard. An option of ISO 3449 level-II cab is also available. Seat belt with reminder is provided as standard fitment.



Simplified Maintenance



Easy access

The design of the new ZAXIS470H incorporates a range of convenient features for routine maintenance. They have been created by our engineers in order to save you time and make life a little less stressful. The fuel filters and engine oil filter can all be replaced from the excavator's walkway. As other work on the upper structure of the machine, like replacing the air cleaner, can be carried out easily.

Easy servicing

The new ZAXIS470H is equipped with a solenoid fuel pump (optional), which means there is no need to pump manually if the engine stops due to lack of fuel or while the main fuel filter is being changed. The machine's utility space stores an electric grease pump, hose reel (optional) and tool box. This means that batteries and an electrical equipment box are conveniently located in one place.

Easy cleaning

To maximise productivity and ensure optimum levels of availability in quarry/mining or on any construction site, we have introduced a variety of quick solutions to the new ZAXIS470H for routine maintenance and cleaning. One example of these convenient features can be seen on the exterior of the machine, where the air conditioning condenser can be easily opened for cleaning the condenser and radiator located behind. The cleaning process is also easier thanks to the parallel positioning of the cooling package.

Low life cycle costs

Service intervals are long enough to slash maintenance costs.



Fast lubrication

The arm and boom have their own centralized greasing points for fast lubrication. a stand center light lubrication system is provided for front attachment.

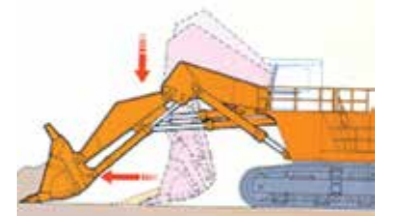
◆ Fuel feed pump as standard feature

Equipped with a 705 L large capacity fuel tank & longer operations, solenoid fuel pump makes fuel filling faster.

Patented Auto Level Crowd Mechanism

Tata Hitachi's unique patented auto level crowd mechanism on the ZAXIS470H shovel version gives exceptional job efficiency, loading capability and operating ease. The level crowding operations are greatly simplified with just one control level needed, the result is dramatically shorter cycle time and greatly increased productivity. This design also enables the crowd force to become strongest around the maximum reach point where the force is most required.

The parallel link mechanism keeps the bucket digging angle constant, and level cylinder circuit maintains the bucket height constant. Due to this feature the need for additional clean-up equipment is also eliminated as it ensures a level mine floor contributing to increased tyre life of the haul equipment. It also facilitates Auto-Bucket level raise avoiding spillage of the material apart from contributing greatly to the increased productivity. Patents registered in USA, Germany and Japan.



Auto-Leveling Crowd Mechanism



Auto Bucket level raise system

Tata Hitachi Support Chain

A full customer support system offered on buying a Tata Hitachi GI Series machine.

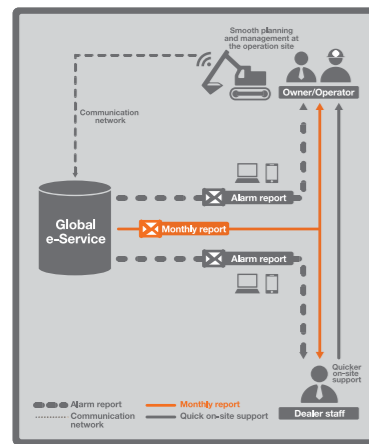


Monitor your machines closely with ConSite

Data Services



ConSite is a consolidated solution service that links you to your machines on the construction site. Through this system, we present your machine's key operational data with meaningful insights by tapping into Tata Hitachi's vast experience and database. There are two kinds of report services:



A. Monthly Report
A detailed monthly operational report helps you to analyse and improve the operational efficiency of your machine.

- Consolidated monthly operation reports with advice via email.
 - Alarm or emergency notifications via email.
- These two reports allow you to visualise the operation status of your machine, improve the efficiency of machine management and work closer with Tata Hitachi.

Key Items included in the report:

- Status of parameters affecting fuel economy.
- Part wise operations time
- Recommended action

B. Alarm Report

If there is an alarm triggered in the machine and the problem requires urgent attention to prevent downtime, an emergency alarm report will be sent to the registered email addresses so that necessary measures can be taken. This information also flows to your authorised service representatives for smoother coordination and to reduce your machine's downtime.

- Key items included in the report:
- Machine identification with hour meter details
 - Alarm code / name
 - Recommended action

SMART REMOTE MACHINE MANAGEMENT

MONTHLY REPORT VIA E-MAIL

Know everything about your machine & how to increase productivity while reducing costs

PERFORMANCE ANALYSIS

Benchmarking your machine against similar class machines in the region

CAUTION ALARM

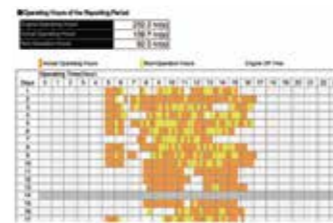
Pre-emptive information of your machine's health

EMERGENCY ALARM

Real time notification to you and the dealer to avoid machine breakdowns

SITE EFFICIENCY PARAMETERS

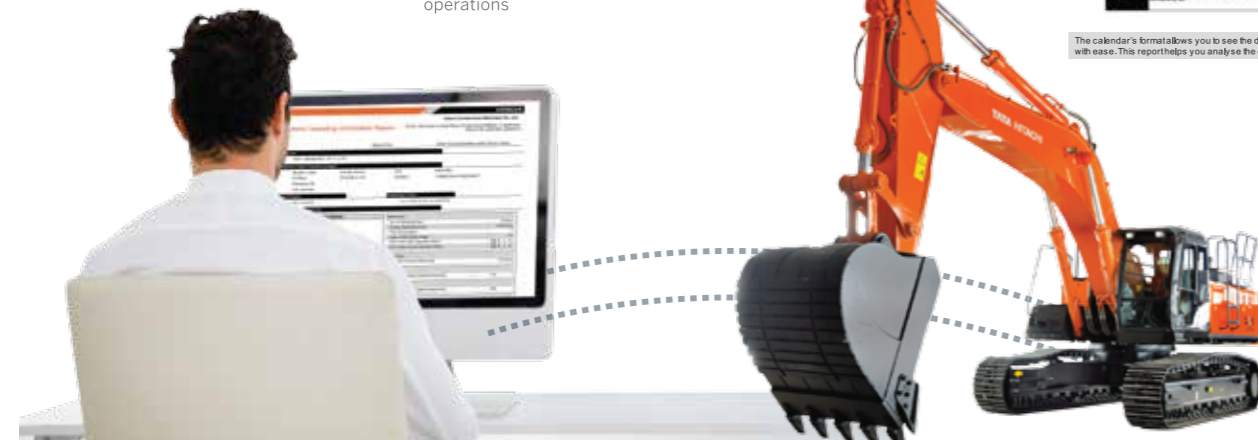
Advises you on ways to fine tune everyday operations



The daily operation reports shows in detail when the machine is operating and its time, which is represented by different colours in the 24-hour timeline.



The calendar's format allows you to see the daily operation times of your machine with ease. This report helps you analyse the operation trend of each machine.

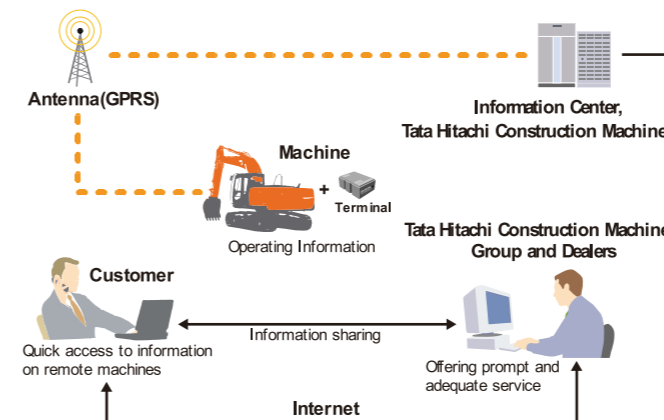


Remote Fleet Management with Global e-Service

Easy access to On-Site Machines through the internet

Global e Service is a convenient and simple system designed to give you valuable information regarding the operations, maintenance, system parameters and alarms of your machines from the convenience of your office. This system can be configured to give you a customised dashboard of the vital parameters that you would like to monitor, to increase productivity and reduce the downtime of your fleet.

The operating data and logs are sent to our servers for processing and then to customers and dealers around the world. This system is available 24 hours a day, all the year round and can be viewed on your laptops and mobile devices through the Internet.



Note: In Some Regions, Global e-Service may not be Available due to Local Regulations.

Main Features of Global e-Service

Global e Service provides easy access to a machine on site conveying operating information and log, including daily operating hours, operations, fuel levels, location, itemised maintenance scheduling, machine's technical parameters and alarm history.



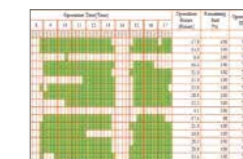
Operation

- Working site of customer machine can be determined.
- Route to working site of customer machine can be determined also.

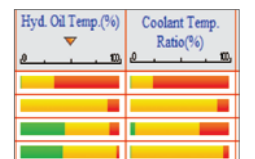
Machine No.	Alarm Code	Alarm Name	Alarm Time	Alarm Location
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1
GERBANY 2010.2	BEN4CM	Engine	2010.2.1	1

Alarm function

Information of alarms as causes of machine failures can be received in real time.



Hour meter / Daily report
Daily machine operation hours and remaining fuel can be determined.



Operation information
Hydraulic oil temperature, swing hours and other data are determined.

Support Solutions

Full Maintenance Contract by Tata Hitachi is a fully customized service offering for customers having large fleet of machines. Designed to meet specific requirement of individual customers. It maximizes the production by ensuring maximum machine utilization.

Objectives

- Maximize equipment availability
- Minimize operating cost through planned maintenance
- Enhanced reliability and maintainability through monitoring of MTTR and MTBF
- Technical skill development of customer personnel
- Extend equipment life to maximize returns on investment

Benefits

- Higher productivity through increased utilization
- Life cycle maintenance cost known at the start of the contract
- Allows customer to concentrate on their core activity
- Higher equipment availability resulting in leaner fleet size
- Improved cost efficiency through higher utilization and extended equipment life.
- Better resale value of equipment



SPECIFICATIONS

ENGINE

Model Isuzu AA-6WG1TQA
 Type 4-cycle water-cooled, direct injection
 Aspiration Turbocharged
 No. of cylinders 6
 Rated power power
 ISO 9249, net H/P mode:
 (With Fan) 235 kW (315 HP) at 1 800 min⁻¹ (rpm)
 SAE J1349, net H/P mode:
 (With Fan) 231 kW (310 HP) at 1 800 min⁻¹ (rpm)
 Maximum torque 1 275 Nm (130 kgf m) at 1 500 min⁻¹ (rpm)
 Piston displacement 15.681 L
 Bore and stroke 147 mm x 154 mm
 Batteries 2 x 12 V / 170 Ah

HYDRAULIC SYSTEM

Hydraulic Pumps

Main pumps 2 variable displacement axial piston pumps
 Maximum oil flow 2 x 360 L/min
 Pilot pump 1 gear pump
 Maximum oil flow 30 L/min

Hydraulic Motors

Travel 2 axial piston motors with parking brake
 Swing 2 axial piston motors

Relief Valve Settings

Implement circuit 31.9 MPa (325 kgf/cm²)
 Swing circuit 28.4 MPa (290 kgf/cm²)
 Travel circuit 35.3 MPa (360 kgf/cm²)
 Pilot circuit 3.9 MPa (40 kgf/cm²)
 Power boost 35.3 MPa (360 kgf/cm²)

Hydraulic Cylinders

	Quantity	Bore Rod	Diameter
Boom	2	170 mm	115 mm
Arm	1	190 mm	130 mm
Bucket	1	170 mm	120 mm

UPPERSTRUCTURE

Revolving Frame

D-section frame for resistance to deformation.

WEIGHTS AND GROUND PRESSURE

Model	Operating weight	Ground pressure	
ZX470H Backhoe	47 100 kg	0.894 kgf/sq cm ²	87.7 kPa
ZX470H Shovel	47 500 kg	0.902 kgf/sq cm ²	88.5 kPa

BUCKET AND ARM DIGGING FORCE

Boom length	6.3 m BE-boom			Boom 7.0 m
	Arm length	2.5 m BE-arm	2.9 m BE-arm	7.0 m BE-arm
Bucket digging force* ISO		282 kN (28 780 kgf)	285 kN (29 130 kgf)	219 kN(22,360 kgf)
Bucket digging force* SAE : PCSA		250 kN (25 570 kgf)	257 kN (26 240 kgf)	196 kN(20,030 kgf)
Arm crowd force* ISO		299 kN (30 520 kgf)	256 kN (26 140 kgf)	122 kN(12,440 kgf)
Arm crowd force* SAE : PCSA		289 kN (29 530 kgf)	249 kN (25 420 kgf)	120 kN(12,240 kgf)

* At power boost

Swing Device

Axial piston motor with planetary reduction gear is bathed in oil. Swing parking brake is spring-set/hydraulic-released disc type. Swing speed 9.0 min⁻¹ (rpm)

Operator's Cab

Independent spacious cab, 1 025 mm wide by 1 675 mm high, confirming to ISO* 3449 line level I Standard.
 * International Organization for Standardization

UNDERCARRIAGE

Tracks

Track shoes with triple grousers made of induction-hardened rolled alloy.
 Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

Numbers of Rollers and Shoes on Each Side

Upper rollers 2
 Lower rollers 8
 Track shoes 49
 Track guard Standard
 Full guard optional

Travel Device

Each track driven by axial piston motor through reduction gear for counterrotation of the tracks. Parking brake is spring-set/hydraulic-released disc type.

Automatic transmission system: High-Low.

Travel speeds High : 0 to 5.1 km/h
 Low : 0 to 3.8 km/h

Maximum traction force 329 kN (33 600 kgf)
 Gradeability 70% (35 degree) continuous

SERVICE REFILL CAPACITIES

Fuel tank 705.0 L
 Engine coolant 61.0 L
 Engine oil 55.0 L
 Swing device (each side)..... 6.5 L
 Travel device (each side)..... 11.0 L
 Hydraulic system 510.0 L
 Hydraulic oil tank 310.0 L

SPECIFICATIONS

BACKHOE BUCKETS

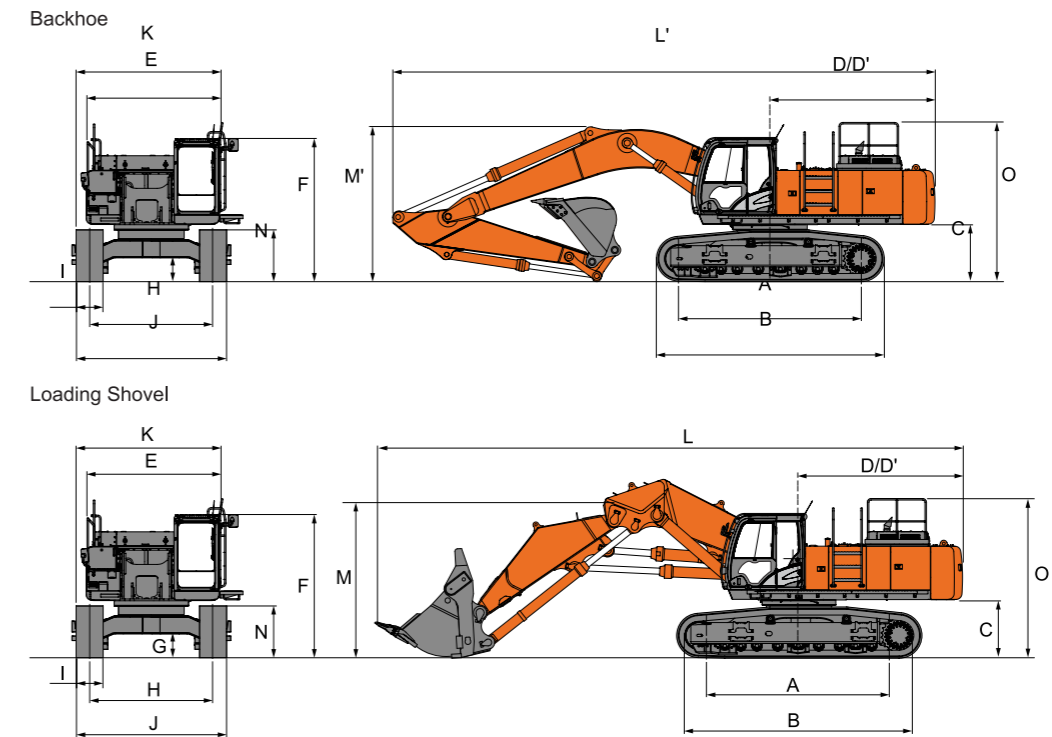
Sl. No.	Type	Capacity	Width		No. of teeth	Weight	Recommended maximum material density	Recommendation			
			Without side cutter	With side cutter				6.3 m Boom		7.0m Arm	
								2.5m Arm	2.9m Arm	7.0m Arm	7.0m Arm
1	GP	3.1m ³	1802 mm	1868 mm	6	2360 kg	1800 kg/m ³	✓	✗	✗	✗
2	GP	3.1m ³	1722 mm	1862 mm	5	2310 kg	1800 kg/m ³	✓	✗	✗	✗
3	GP	3.0m ³	1762 mm	1902 mm	5	2060 kg	1800 kg/m ³	✓	✗	✗	✗
4	GP	2.8m ³	1682 mm	1822 mm	5	1920 kg	1800 kg/m ³	○	✓	✗	✗
5	ROCK	2.5m ³	1760 mm	1826 mm	5	2560 kg	2000 kg/m ³	✓	✓	✗	✗
6	GRANITE	1.9m ³	1400 mm	1466 mm	5	2083 kg	Boulders	✓	✓	✗	✗
7	COAL	3.0m ³	1762 mm	1902 mm	No tooth	1910 kg	1000 kg/m ³	○		✗	✗
8	COKE	3.0m ³	2506 mm	No Side Cutting	No tooth	1182 kg	1000 kg/m ³	✗	✗	✓	✗
9	COKE	2.8m ³	2387 mm	No Side Cutting	No tooth	1137 kg	1000 kg/m ³	✗	✗	✗	✓
10	DREDGING	1.0m ³	1132 mm	No Side Cutting	No tooth	1227 kg	1800 kg/m ³	✗	✗	✗	✓

✓ Option is available ○ Option is technically feasible but generally not offered * ISO heat

LOADING SHOVEL BUCKET

Sl. No.	Type	Capacity	Maximum width	No. of teeth	Weight
1	Bottom dump type slag handling bucket	2.6 m ³	1943 mm	6	3170 kg

DIMENSIONS



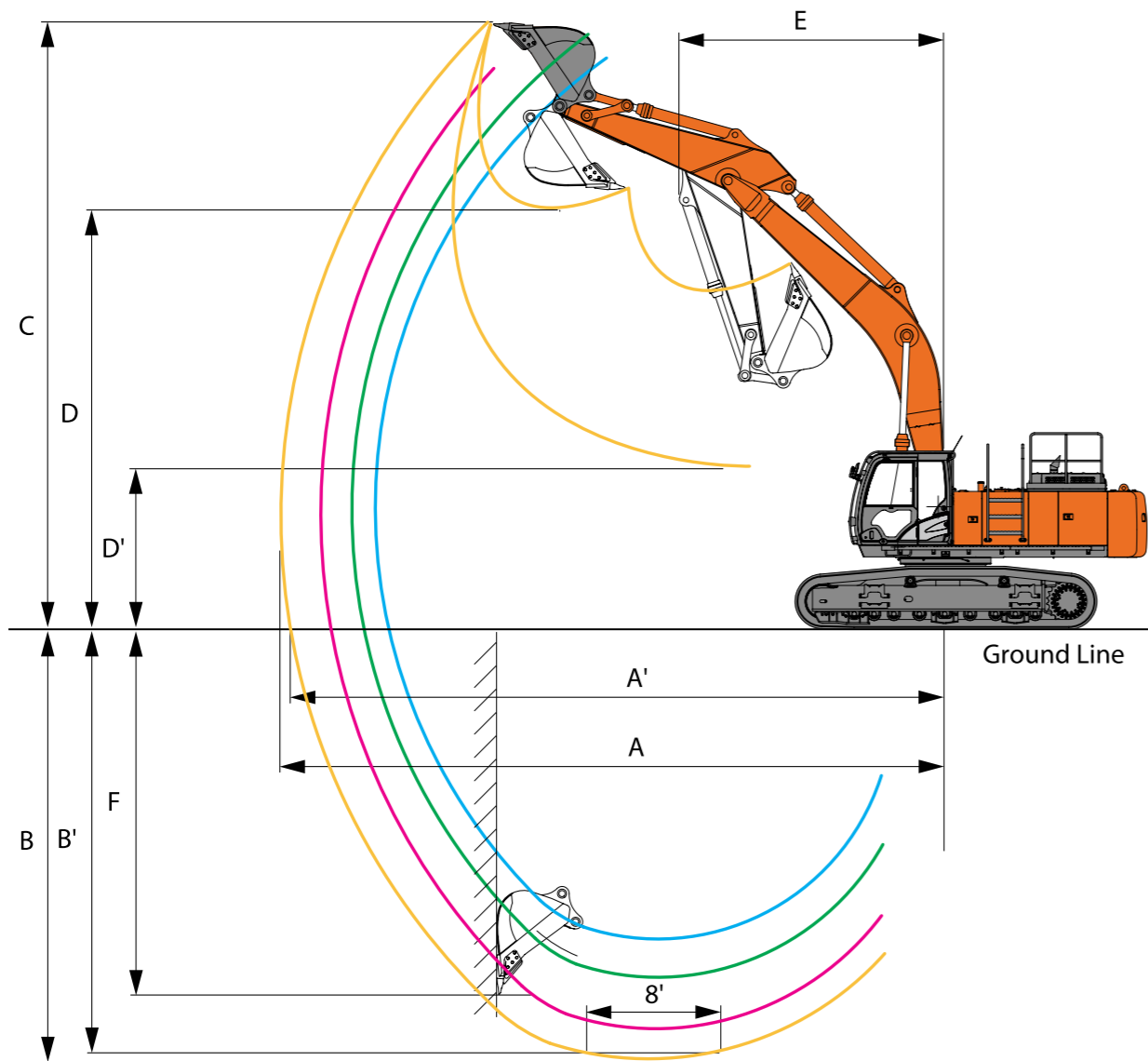
A Distance between tumblers	4 040
B Under carriage length	5 040
*1C Counter weight clearance	1 230
D Rear-end swing radius	3 670
D' Rear-end length	3 660
E Overall width of upperstructure	3 480
F Overall height of cab	3 170
*1G Min. ground clearance	495
H Track gauge	2 740

I Track shoe width	G 600
J Undercarriage width	3 340
K Overall width	3 820
L Overall length	12 110
M Overall height of boom	4 000
L' Overall length	12 010
M' Overall height of boom	3 480
N Track height	1 150
O Overall height of base machine	3 540

*1Excluding track shoe lug G: Triple grouser shoe

SPECIFICATIONS

WORKING RANGES BACKHOE

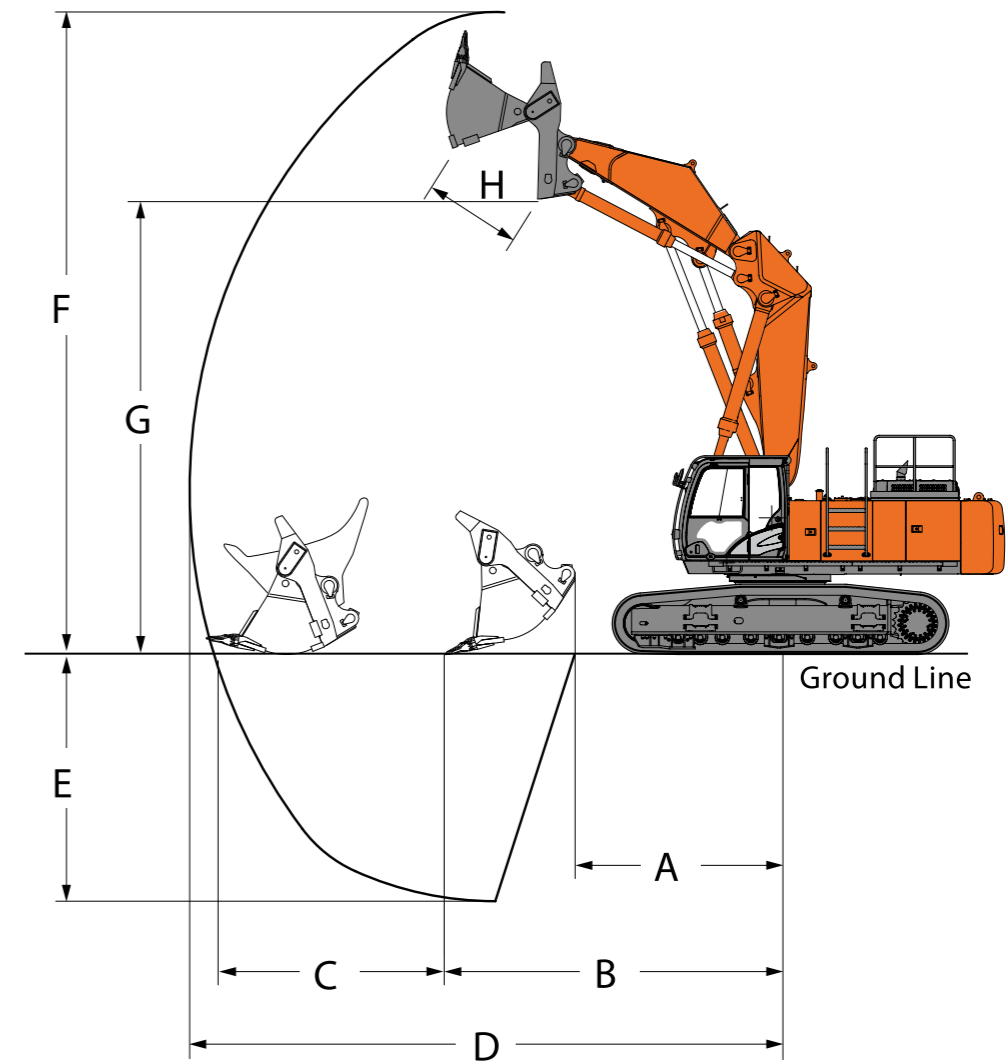


Unit: mm

Arm length	6.3 m BE-boom			Boom 7.0 m
	2.5 m BE-arm	2.9 m BE-arm	7.0 m BE-arm	Arm 7.0 m
A Max. digging reach	10 460	10 850	14,620	15 120
A' Max. digging reach (on ground)	10 240	10 640	14 440	14 960
B Max. digging depth	5 920	6 360	10 030	11 100
B' Max. digging depth (8° level)	5 740	6 200	9 930	11 020
C Max. cutting height	10 530	10 760	13 780	12 480
D Max. dumping height	7 190	7 210	10 900	9 500
D' Min. dumping height	3 550	3 030	-	-
E Min. swing radius	3 930	3 930	4 850	5 000
F Max. vertical wall	4 380	4 150	9 980	10 340

Excluding track shoe lug

WORKING RANGES LOADING SHOVEL



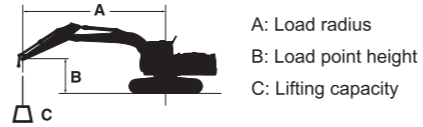
Unit: mm

Item	Bottom dump type
A Min. digging distance	2 750
B Min. Level crowding distance	5 010
C Level crowding distance	3 370
D Max. digging reach	8 760
E Max. digging depth	4 130
F Max. cutting height	10 070
G Min. dumping height	7 500
H Max. bucket opening width	1 390
I Min. Bucket tilting angle on ground	54°
J Arm Crowding Force * ISO	296 kN (30,200 kgf)
K Breakout Force * ISO	271 kN (27,600 kgf)

Excluding track shoe lug

LIFTING CAPACITIES

LIFTING LOAD CHART OF ZAXIS470H WITH 6.3m BOOM 2.5m ARM WITHOUT BKT



Rating over-front Rating over-side or 360 degrees Unit : 1000kg

Conditions	Load point height m	Load radius												At max. reach				
		1.5 m		3 m		4.5 m		6 m		7.5 m		9 m		meter				
BE boom 6.3 m	7.5							15*	14							12*	12	6.7
BE arm 2.5 m	6							15.3*	14.0							11.9*	9.2	7.7
without bucket	4.5					21.7*	20.7	16.9*	13.3							11.9	8.0	8.3
Shoe 600 mm	3							18.7*	12.5							11.0	7.4	8.6
	1.5							18.5*	11.9							10.8	7.2	8.6
	0 (Ground)					27.2*	17.6	18.2*	11.6							11.2	7.4	8.4
	-1.5					25.2*	17.6	18.1*	11.5							12.3	8.1	7.8
	-3					21.5*	18.0	16.7*	11.7							13.7*	9.8	6.9
	-4.5																	

Notes : 1. Lifting Capacity of the ZX series does not exceed 75% of tipping load with the machine on firm level ground or 87% of full hydraulic capacity.
2. * Indicates load limited by hydraulic capacity.

LIFTING LOAD CHART OF ZAXIS470H WITH 6.3m BOOM 2.9m ARM WITHOUT BKT

Rating over-front Rating over-side or 360 degrees Unit : 1000kg

Conditions	Load point height m	Load radius												At max. reach				
		1.5 m		3 m		4.5 m		6 m		7.5 m		9 m		meter				
BE boom 6.3 m	7.5							14*	14*							8*	8*	7.1
BE arm 2.9 m	6							14.8*	14.2							7.8*	7.8*	8.0
without bucket	4.5					20.8*	20.8*	16.4*	13.6							7.8*	7.7	8.6
Shoe 600 mm	3					25.1*	19.4	18.4*	12.8							8.2*	7.1	8.9
	1.5					27.6*	18.2	18.8	12.1							8.9*	7.0	8.9
	0 (Ground)					27.7*	17.8	18.3	11.8							10.0	7.1	8.6
	-1.5					26.1*	17.8	18.2	11.6							11.7	7.7	8.1
	-3			23.3*	23.3*	22.8*	18.0	17.6*	11.8							13.7*	9.2	7.2
	-4.5																	

Notes : 1. Lifting Capacity of the ZX series does not exceed 75% of tipping load with the machine on firm level ground or 87% of full hydraulic capacity.
2. * Indicates load limited by hydraulic capacity.

Conditions	Load point height m	Load radius												At max. reach				
		4.5 m		6 m		7.5 m		9 m		10.5 m		12 m		meter				
BE boom 6.3 m	7.5																	
BE arm 7 m	6																	
Counterweight 11700 kg	4.5																	
Shoe 600 mm	3																	
	1.5					9.9*	9.9*	9.9*	9.9*	7.8*	7.8*	8.9*	7.4	7.4	5.8	6.1	4.8	13.1
	0 (Ground)	20.1*	20.1*	15.7*	15.7*	13.8*	11.6	11.1	8.7	8.6	6.8	6.9	5.4	6.1	4.7	4.7	12.9	
	-1.5	30.0*	23.5	19.8	15.0	14.0	10.8	10.6	8.2	8.3	6.5	6.8	5.2					
	-3	30.7	22.1	18.8	14.2	13.4	10.2	10.2	7.9	8.1	6.3	6.7	5.2					
	-4.5	30.0	21.4	18.3	13.7	13.0	9.9	10.0	7.7	8.1	6.2							

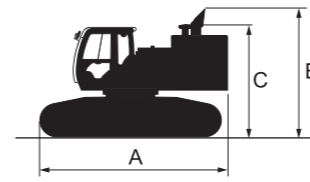
Notes : 1. Lifting Capacity of the ZX series does not exceed 75% of tipping load with the machine on firm level ground or 87% of full hydraulic capacity.
2. * Indicates load limited by hydraulic capacity.

Conditions	Load point height m	Load radius												At max. reach				
		4.5 m		6 m		7.5 m		9 m		10.5 m		12 m		13.5 m		meter		
Boom 7 m	7.5																	
Long arm 7 m	6																	
Counterweight 11700 kg	4.5																	
Shoe 600 mm	3																	
	1.5							10.4*	10.4*			7.7*	7.7*	8.4*	7.3	7.3	5.7	13.6
	0 (Ground)	23.3*	23.3*	17.1*	15.5	14.2	11.1	10.7	8.4	8.4	6.5	6.8	5.2					
	-1.5	30.7	22.1	18.9	14.3	13.5	10.3	10.2	7.9	8.1	6.2	6.6	5.0					
	-3	29.4	21.1	18.1	13.5	12.9	9.8	9.9	7.5	7.9	6.0	6.5	4.9					
	-4.5	28.9	20.5	17.7	13.1	12.6	9.5	9.6	7.3	7.7	5.9							

Notes : 1. Lifting Capacity of the ZX series does not exceed 75% of tipping load with the machine on firm level ground or 87% of full hydraulic capacity.
2. * Indicates load limited by hydraulic capacity.

TRANSPORTATION

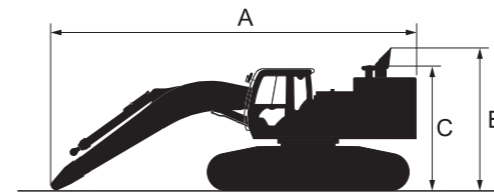
BASIC MACHINE (WITHOUT COUNTERWEIGHT)



Shoe width	A	B	C ¹	Overall width ²	Weight
600 mm	5 460 mm	3 320 mm	3 330 mm	3 310 mm	27 500 kg

¹ Without exhaust funnel
² Undercarriage retracted

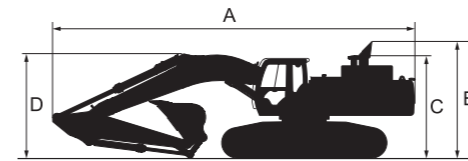
BASIC MACHINE FITTED WITH BOOM AND NO SIDEWALK



Boom length	Shoe width	A	B	C ¹	Overall width ²	Weight
6.3 m BE	600 mm	9 170 mm	3 320 mm	3 540 mm	3 310 mm	32 300 kg

¹ Without exhaust funnel
² Undercarriage retracted

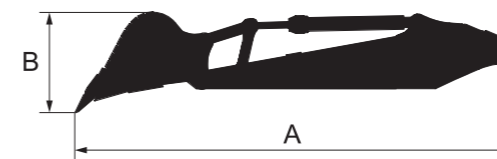
BASIC MACHINE FITTED WITH FRONT AND SIDEWALK



Boom length	6.3 m BE	
Arm length	2.5 m BE	2.9 m BE
A	11 660 mm	11 320 mm
B	3 870 mm	
C ¹	3 400 mm	
D	4 300 mm	3 740 mm

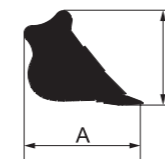
¹ Without exhaust funnel

ARM AND BUCKET



Arm	Bucket SAE, PCSA heaped	A	B	Overall width	Weight
2.5 BE	2.50 m ³	5 650 mm	1 470 mm	1 820 mm	5 000 kg
2.9 BE	2.30 m ³	6 030 mm	1 340 mm	1 700 mm	4 800 kg

BUCKET



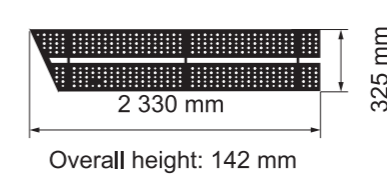
Rock bucket

Bucket		A	B	Overall width	Weight
ISO heaped	CECE heaped				
1.9 m ³	1.7 m ³	2 030 mm	1 480 mm	1 500 mm	2 070 kg
2.5 m ³	2.2 m ³	1 950 mm	1 650 mm	1 820 mm	2 360 kg

COUNTERWEIGHT 9 080 kg



LEFT FRONT SIDEWALK 28 kg



LEFT REAR SIDEWALK 20 kg

