ZAXIS380HH

## HITACHI

## ZAXIS 380HH Quarry Specification

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# ZAXIS Brutal Crushing Digging Power...

## from the 38-ton Class Reinforced Hydr aulic Excavator

Hitachi's technology is built on a wealth of experience and know-how from limestone sites and guarries around the world. The guarry specification concept continues to evolve in answer to increasingly demanding operational tasks.

## **Strong Boom and Arm**

- Reinforced boom and arm plus stress-relieved welds
- Protected hydraulic hoses and strengthened pipe clamps
- Reinforced bushings

## **Highly Durable Bucket**

Reshaped, wear-resisting steel bucket

## **Reinforced Undercarriage**

- Oversized travel device equivalent to the bigger-class ZAXIS450/450H
- Increased traction force
- Reinforced travel motor cover with square bars
- Reinforced undercarriage and side steps
- Strengthened sideframe for idler
- Reinforced track guard (full guard)

## **Rugged Pressurized Cab**

- ISO-standard FOPS cab with integrated overhead guard
- Auto control air conditioner
- Comfort increased to reduce operator fatigue

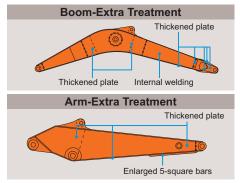
1 Caution plates on the machine will vary according to country 2. Photos may include optional equipment



#### Strong Boom and Arm

#### **Reinforced Boom and Arm Plus Stress-Relieved Welds**

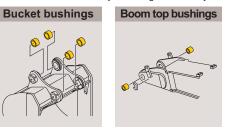
The strong, dependable boom and arm are what you need most for tough jobs. They are reinforced, and stress-relieved.



#### **Protected Hydraulic Hoses and** Strengthened Pipe Clamps

#### **Reinforced Bushings**

Ample thick-walled bushings are utilized at both the arm-bucket and arm-boom joint for higher durability.



#### **Highly Durable Bucket**

#### **Reshaped, Wear-Resisting Steel Bucket**

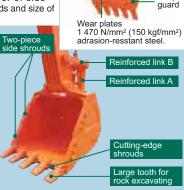
This QS-bucket is made of wear-resisting steel, and reshaped with side shrouds, cutting-edge shrouds, and large bucket teeth for enhanced durability. Easily

Reinforced

Adopter

rid

replaceable lateral wear plates help reduce downtime. The limestone bucket has similar features except number of side shrouds and size of tooth.



#### **Reinforced Undercarriage**

#### **Oversized Travel Device**

The machine can move about, regardless of tough underfooting, thanks to ZAXIS450/450H class oversized track devices and components.

#### **Increased Traction Force**

**Reinforced Travel Motor Cover with Square Bars** 



#### **Reinforced Undercarriage**

A reshaped box design with X-beams helps disperse stress. This design boosts the overall rigidity of the entire undercarriage.

#### **Reinforced Side Steps**

Rigid side steps are reinforced for convenience of servicing and inspection.

#### Strengthened Sideframe for Idler

#### **Reinforced Track Guard (Full Guard)**

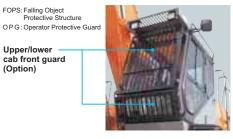


Full track guard Reinforced Strengthened

#### **Rugged Pressurized Cab**

#### **ISO-Standard FOPS Cab with Integrated Overhead Guard**

An ISO-standard FOPS large-size cab is used. It has an integrated overhead guard to help provide protection from falling objects. An optional guard is available for the front windshield to make the cab ISO OPG compliant.



#### **Auto Control Air** Conditioner

Simply set the temperature and forget about it. Ducts are positioned to promote even air flow throughout the cab.

\* Illustration shows a sample of the air flow during bi-level control.

#### **Comfort Increased to Reduce Operator Fatigue**

D-type frame and rigid cab bed work together with the silicone-filled rubber cushions to keep noise and vibration. Lower noise and vibration contribute to less operator fatique.



Sunvisor (Option)

Front Window Shatter-Prevention Film (Option)





Increased Horn Sound (115 dB)















### **SPECIFICATIONS**

#### ENGINE

| Model               | Isuzu AA-6HK1X   |
|---------------------|--|
| Туре                | 4-cycle water-cooled, direct injection   |
| Aspiration          | Turbocharged, intercooled  |
| No. of cylinders    |  |
| Rated power         |  |
|                     | e : 184 kW (250 PS) at 2 000 min <sup>-1</sup> (rpm)<br>e : 177 kW (240 PS) at 1 900 min <sup>-1</sup> (rpm) |
|                     |  |
|                     | e : 180 kW (247 hp) at 2 000 min <sup>-1</sup> (rpm)<br>e : 173 kW (237 hp) at 1 900 min <sup>-1</sup> (rpm) |
| Maximum torque      |  |
|                     | at 1 700 min <sup>-1</sup> (rpm)   |
| Piston displacement |  |
| Bore and stroke     |  |
| Batteries           |  |
| Governor Mecha      | nical speed control with stepping motor  |

#### HYDRAULIC SYSTEM

· Work mode selector

Digging mode / Attachment mode

· Engine speed sensing system

| Main pumps 2 variable displacement axial piston pumps     |    |
|---|----|
| Maximum oil flow 2 x 290 L/min (76.6 US gpm, 63.8 lmp gpm | I) |
| Pilot pump 1 gear pump                                    | р  |
| Max. oil flow 32 L/min. (8.5 US gpm, 7.0 Imp gpm          | I) |

#### Hydraulic Motors

2 variable displacement axial piston motors Travel Swing .... 1 axial piston motor

#### **Relief Valve Settings**

| Implement circuit | 31.4 | MPa   | (320   | kgf/cm <sup>2</sup> , 4 | 1 550 | psi) |
|-------------------|------|-------|--------|-------------------------|-------|------|
| Swing circuit     | 31.4 | MPa   | (320   | kgf/cm <sup>2</sup> , 4 | 1 550 | psi) |
| Travel circuit    | 34.3 | MPa   | (350   | kgf/cm <sup>2</sup> , 4 | 1 980 | psi) |
| Pilot circuit     |      | 3.9 N | 1Pa (4 | 10 kgf/cm <sup>2</sup>  | , 570 | psi) |
| Power boost       | 34.3 | MPa   | (350   | kgf/cm <sup>2</sup> , 4 | 1 980 | psi) |
|                   |      |       |        |                         |       |      |

#### Hydraulic Cylinders

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom and arm cylinders to absorb shock at stroke ends.

#### Dimensions

|        | Qty. | Bore           | Rod diameter   |
|--------|------|----------------|----------------|
| Boom   | 2    | 150 mm (5.91") | 105 mm (4.13") |
| Arm    | 1    | 170 mm (6.69") | 115 mm (4.53") |
| Bucket | 1    | 145 mm (5.71") | 95 mm (3.74")  |

#### Hydraulic Filters

Hydraulic circuits use high-quality hydraulic filters. A suction filter is incorporated in the suction line, and full-flow filters in the return line and swing/travel motor drain lines.

#### 

Pilot controls. Hitachi's original shockless valve and guick warm-up system built in the pilot circuit.

Implement levers .. Travel levers with pedals

#### 

#### **Revolving Frame**

Welded sturdy box construction, using heavy-gauge steel plates for ruggedness. D-section frame for resistance to deformation.

#### Swing Device

Axial piston motor with planetary reduction gear is bathed in oil. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion gear are immersed in lubricant. Swing parking brake is spring-set/hydraulic-released disc type

Swing speed . ..... 11.8 min<sup>-1</sup> (rpm)

#### **Operator's Cab**

Headguard integrated independent roomy cab, 1 005 mm (40") wide by 1 820 mm (72") high, conforming to ISO\* Standards. Reinforced glass windows on 4 sides for visibility. Adjustable, reclining seat with armrests; movable with or without control levers. \* International Standardization Organization

#### UNDERCARRIAGE

Tracks

Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame. Lubricated track rollers, idlers, and sprockets with floating seals. 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   | 46 |                  |
| Track guard   | 1: | Full track guard |

#### Travel Device

\_

Each track driven by 2-speed axial piston motor through planetary reduction gear for counterrotation of the tracks. Sprockets are replaceable. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

| Travel speedsHigh 0 t    | o 5.3 km/h (3.3 mph)           |
|--------------------------|--------------------------------|
| Low 0 t                  | o 3.2 km/h (2.0 mph)           |
| Maximum traction force28 | 35 kN (29 100 kgf, 64 200 lbf) |
| Gradeability             | 5° (70%) continuous            |

#### WEIGHTS AND GROUND PRESSURE

Equipped with 6.40 m (21'0") QS-boom, 3.20 m (10'6") QS-arm and 1.50 m3 (1.96 yd3: PCSA heaped) QS-bucket.

| Shoe type         | Shoe width      | Operating weight         | Ground pressure                    |
|-------------------|-----------------|--------------------------|------------------------------------|
| Triple<br>grouser | 600 mm<br>(24") | 37 800 kg<br>(83 300 lb) | 76 kPa<br>(0.77 kgf/cm², 10.9 psi) |
|                   |                 |                          | 00 kg (17 600 lb), counter-        |

weight and triple grouser shoes, excluding front-end attachment, fuel, hyd. oil, eng. oil and coolant etc.] is:

ZAXIS380HH......29 000 kg (65 900 lb) with 600 mm (24") reinforced shoes

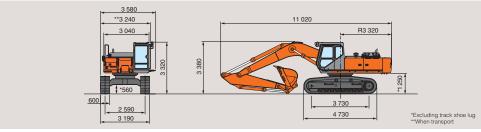
| SERVICE REFILL CA         | APACITI | IES    |         |
|---------------------------|---------|--------|---------|
|                           | liters  | US gal | Imp gal |
| Fuel tank                 | 560.0   | 148.0  | 123.2   |
| Engine coolant            | 35.0    | 9.2    | 7.7     |
| Engine oil                | 36.0    | 9.5    | 7.9     |
| Swing device              | 16.3    | 4.3    | 3.6     |
| Travel device (each side) | 11.5    | 3.0    | 2.5     |
| Hydraulic system          | 320.0   | 84.5   | 70.4    |
| Hydraulic oil tank        | 154.0   | 40.7   | 33.9    |

#### JON 1 **BACKHOE ATTACHMENTS**

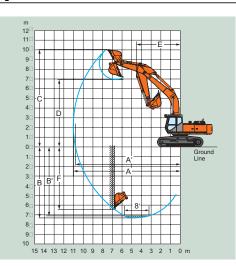
Boom and arms are of welded, box-section design. 6.40 m (21'0") QSboom. 3.20 m (10'6") QS-arm are available. Bucket is of welded steel structure.

#### DIMENSIONS





#### WORKING RANGES



|                       |             | Unit: mm (ft in)                 |  |  |  |  |  |
|-----------------------|-------------|----------------------------------|--|--|--|--|--|
|                       |             | ZAXIS380HH                       |  |  |  |  |  |
| Arm length            | ı           | 3.20 m (10'6")                   |  |  |  |  |  |
| A Max. digging reach  |             | 11 020 (36'2")                   |  |  |  |  |  |
| A' Max. digging reach | (on ground) | 10 800 (35'5")                   |  |  |  |  |  |
| B Max. digging depth  |             | 7 290 (23'11")                   |  |  |  |  |  |
| B' Max. digging depth | (8'level)   | 7 110 (23'4")                    |  |  |  |  |  |
| C Max. cutting height |             | 10 010 (32'10")                  |  |  |  |  |  |
| D Max. dumping heigh  | nt          | 6 970 (22'10")                   |  |  |  |  |  |
| E Min. swing radius   |             | 4 500 (14'9")                    |  |  |  |  |  |
| F Max. vertical wall  |             | 6 440 (21'2")                    |  |  |  |  |  |
| Bucket digging force* | ISO         | 240 kN (24 500 kgf , 54 000 lbf) |  |  |  |  |  |
|                       | SAE:PCSA    | 204 kN (20 800 kgf , 45 900 lbf) |  |  |  |  |  |
| Arm crowd force*      | ISO         | 178 kN (18 200 kgf , 40 100 lbf) |  |  |  |  |  |
|                       | SAE:PCSA    | 170 kN (17 300 kgf , 38 100 lbf) |  |  |  |  |  |

Excluding track shoe lug \* At power boost

| Buckets   |             |                                    |                                 |              |                   |
|---|-------------|------------------------------------|---------------------------------|--------------|-------------------|
| Capacit   | iy .        | Wi                                 | dth                             |              |                   |
| PCSA<br>heaped<br>m³ (yd³)         CECE<br>heaped<br>m³           *1.2 1.50 (1.96)         1.30 |             | Without<br>side cutters<br>mm (in) | With<br>side cutters<br>mm (in) | No. of teeth | Weight<br>kg (lb) |
| *1.2 1.50 (1.96) 1.30   |             | 1.96) 1.30 1 440 (57") 1 470 (58") |                                 | 5            | 1 660 (3 660)     |
| *1,3 1.50 (1.96) 1.30   |             | 1 440 (57") 1 470 (58")            |                                 | 5            | 1 600 (3 530)     |
| *4 0.90 (1.18) 0.80   |             | 1 010 (40")                        | —                               | 3            | 1 690 (3 730)     |
| 0   | ne-point ri | pper bucket                        |                                 | 1            | 980 (2 160)       |

A \_\_\_\_\_

\*1 Super V teeth type bucket \*2 QS-bucket \*3 Limestone bucket \*4 Ripper bucket

#### LIFTING CAPACITIES

|   |           |          |       |          |       |          |       |       |        |      |       |          |        | Y        |      | B: Lo | ad radiu<br>ad point<br>ting cap | t height |
|---|-----------|----------|-------|----------|-------|----------|-------|-------|--------|------|-------|----------|--------|----------|------|-------|----------------------------------|----------|
| METRIC MEASURE Constraints and the state of |           |          |       |          |       |          |       |       |        |      |       | Unit:1   | 000 kg |          |      |       |                                  |          |
|   | Load      |          |       |          |       |          |       | Load  | radius |      |       |          |        |          |      |       |                                  |          |
| Conditions  | Point     | 3        | m     | 4        | m     | 5        | m     | 6     | m      | 7    | m     | 8        | m      | 9        | m    | At n  | nax.re                           | ach      |
|   | height    | ð        | Ů     | <b>O</b> | Ů     | <b>O</b> | Ů     | O     | Ů      | O    | Ů     | <b>O</b> | Ů      | <b>O</b> | Ů    | O     | ĥ                                | meter    |
| QS-Boom 6.40m   | 6m        |          |       |          |       |          |       |       |        |      |       | 5.68     | 6.21*  |          |      | 3.45* | 3.45*                            | 9.89     |
| QS-Arm 3.20m  | 4m        |          |       |          |       |          |       | 8.36* | 8.36*  | 6.97 | 7.44* | 5.43     | 6.82*  | 4.27     | 6.24 | 3.11  | 3.61*                            | 10.4     |
| QS-bucket   | 2m        |          |       |          |       | 11.0     | 13.5* | 8.24  | 10.7*  | 6.40 | 8.92* | 5.06     | 7.41   | 4.04     | 5.99 | 2.93  | 3.99*                            | 10.5     |
| PCSA:1.50m <sup>3</sup>   | O(Ground) |          |       |          |       | 10.1     | 15.4* | 7.62  | 11.4   | 5.95 | 8.84  | 4.75     | 7.07   | 3.84     | 5.78 | 3.07  | 4.69*                            | 10.1     |
| CECE:1.30m <sup>3</sup>   | -2m       | 11.1*    | 11.1* | 14.7     | 18.5* | 9.99     | 15.0* | 7.41  | 11.2   | 5.76 | 8.63  | 4.61     | 6.92   | 3.76     | 5.70 | 3.66  | 5.53                             | 9.23     |
| Shoe 600mm  | -4m       | 18.5*    | 18.5* | 15.0     | 15.6* | 10.2     | 13.0* | 7.52  | 10.8*  | 5.84 | 8.72  |          |        |          |      | 5.30  | 6.22*                            | 7.62     |
|   | -6m       |          |       | 9.69*    | 9.69* | 8.11*    | 8.11* |       |        |      |       |          |        |          |      |       |                                  |          |
| NOTEC : 1 Detines and   | hand an   | CAE 1100 | 7     |          |       |          |       |       |        |      |       |          |        |          |      |       |                                  |          |

NOTES 1 Batings are based on SAE J1097

2.Lifting capacity of the ZAXIS series does not exceed 75% of tipping load with the machine on firm , level ground or 87% of full hydraulic capacity 3.The load point is a hook(not standard equipment) loaded on the back of the bucket.

4.\* Indicates load limited by hydraulic capacity



#### STANDARD EQUIPMENT

#### ENGINE

- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air filter with evacuator
- valve (with safety element)
- Cartridge-type engine oil filter
- Cartridge-type fuel filter
- Air cleaner double filters
- Radiator and oil cooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto-idle system
- Auto acceleration system
- Pre-cleaner

#### HYDRAULIC SYSTEM

- Work mode selector
- Engine speed sensing system
- E-P control system
- Power boost
- Auto power lift
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Boom-arm anti-drift valveControl valve with main relief
- valveExtra port for control valve
- Extra port for control valve
   Suction filter
- Suction filter
   Full-flow filter
- Pull-now mile
   Pilot filter

#### CAB

Je

lamps

Hose rupture valves

Additional pump

• Electric fuel refilling pump

• Travel motion alarm device

Auto-lubrication system

Telephone: (03)3830-8050 Facsimile: (03)3830-8204 URL: www.hitachi-c-m.com

· Swing motion alarm device with

- Auto control air conditioner
- Pressurized cab with integrated overhead guard (FOPS)
- All-weather sound-suppressed steel cab equipped with reinforced
- Tinted (bronze color) glass windows
- 6 fluid-filled elastic mounts
- Openable left side window

**OPTIONAL EQUIPMENT** 

Weither Construction Machinery Co., Ltd.

Head Office: 5-1 Koraku 2-chome, Bunkyo-ku, Tokyo 112-8563, Japan

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

- Intermittent windshield wipers
- Front window washer
- Adjustable reclining suspension seat with adjustable armrests
- Footrest
- Electric double horn
- AM FM radio with digital clock
- Auto-idle / acceleration selector
- Seat belt
- Drink holder
- Cigar lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Heater
- Pilot control shut-off lever
- Engine stop knob

#### MONITOR SYSTEM

- Meters:
  - Hourmeter and trip-meter, engine coolant temperature gauge and fuel gauge
  - Warning lamps: Alternator charge, engine oil pressure, engine overheat, air filter restriction and minimum fuel level
  - Pilot lamps: Engine preheat, engine oil level, engine coolant level, hydraulic oil level, work light, auto-idle, auto-acceleration, digging mode and attachment mode
  - Alarm buzzers: Engine oil pressure and engine overheat

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

Rear light

Sunvisor

**KS-E481P** 

• Front glass lower guard

Front glass upper guard

Electric grease gun

· Front windows shatter prevention film

These specifications are subject to change without notice. Illustrations and photos show the standard models, and may or may not include optional equipment, accessories, and all standard equipment with some differences in color and features. Before use, read and understand Operator's Manual for proper operation.

#### LIGHTS

• Fuel double filters

crusher

Large-capacity battery

Attachment basic piping

Accessories for breaker

• Accessories for breaker &

Accessories for 2 speed selector

• 4 working lights

#### UPPERSTRUCTURE

- Undercover8 000 kg (17 600 lb) counter-
- weight
- Fuel level float
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rearview mirror (right & left side)
- Swing parking brake

#### UNDERCARRIAGE

- QS-track frame
- Travel parking brake
- Reinforced travel motor covers
- Hydraulic track adjuster
- Bolt-on sprocket
- Reinforced upper rollers and lower rollers
- Reinforced track links with pin seals
- 600 mm (24") triple grouser shoes
- Reinforced track guard (Full)
- Reinforced side steps
- (bolt mounted)

#### FRONT ATTACHMENTS

- Reinforced resin thrust plate
- Flanged pin
- Welded bucket link A
- Centralized lubrication system
- Dirt seal on all bucket pins
- 6.40 m (21'0") QS-boom
- 3.20 m (10'6") QS-arm
- 1.50 m<sup>3</sup> (1.96 yd<sup>3</sup> : PCSA heaped) QS-bucket
- Reinforced link A
- Reinforced link B
- Damage prevention plate and square bars

· Skid-resistant tapes, plates and

• Travel direction mark on track frame

05.06(KA/KA, GT3)

Printed in Japan

#### MISCELLANEOUS

handrails

Standard tool kit
Lockable machine covers
Lockable fuel filling cap