

# AMPHIBIOUS SOFT TERRAIN BACKHOE

MA200

## APPLICATION & ATTACHMENT

Amazing Mobility on Soft  
Terrains and Swamps with the  
Special Undercarriage

**Model Code :** MA200

**Engine Rated Power :** 122 kW (164 HP)

**Operating Weight :** 21 600 kg

**Backhoe Bucket :** SAE, PCSA Heaped: 0.46 - 0.69 m<sup>3</sup>  
CECE Heaped: 0.4 - 0.6 m<sup>3</sup>



*Note: Some pictures on this brochure show the machine without the operator, and with the front attachment in operating position. These pictures are taken for demonstration purpose only, and these uses are not recommended for normal operation. Pictures in this brochure may include optional equipment. They may also include custom-made options to meet specific user needs.*

# Unparalleled Mobility on Soft Terrains and Swamps

The special undercarriage features high stability and ultra-low ground pressure. The long reach front with the specific-purpose bucket enables productive excavation with extended working ranges. The well designed cab provides a clear view of the jobsite.

## NEW AND IMPROVED

- **Comfort:**
  - Excellent visibility
  - Enhanced controllability
  - Lower noise level
- **New equipment:**
  - Standard satellite communication system
  - Standard rear view camera
  - Standard theft deterrent system
- **Reduced running costs:**
  - Lower fuel consumption per m<sup>3</sup>
  - Improved durability and reliability

## Productivity

New hydraulic system HIOS III  
New E-mode  
New electronic controlled diesel engine  
**Page 4-5**

## Operator comfort

High visibility inside cab  
Short stroke levers  
Wide foot space  
Comfort designed seat  
Improved controllability and operator comfort

## Multi function monitor

Maintenance support  
Rear view camera  
Theft deterrent system  
**Page 6-7**

## Durability and reliability

Square hollow steel shoes  
Knock-down construction  
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## Maintenance

Specific purpose bucket  
Conveniently located inspection points  
Parallel arrangement of the cooling pack  
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## Safety measures

CRES II cab  
Cab right protection bars  
Engine shut-off switch  
Pilot control shut-off lever  
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## Environment measures

Array of low noise mechanisms  
Ecological design  
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## Parts & service

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## e-Service Owner's Site

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## Specifications

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- **The new engine complies with the Emission Regulations EU Stage III A**
- **The advanced low noise design complies with the coming EU noise regulation 2000 / 14 / EC, STAGE II**



# Boosted Productivity

New hydraulic system HIOS III and new OHC 4-valve diesel engine were developed for MA200. These advanced technologies are at work to yield bigger output with higher fuel efficiency.



## More production, less fuel consumption

### Increased Production

A combination of the hydraulic system (HIOS<sup>III</sup>) and new OHC<sup>\*\*</sup> 4-valve engine allows the efficient use of hydraulic pressure to increase speeds of actuators and boost production with higher fuel efficiency.

*\*Human & Intelligent Operation System*

*\*\*OverHead Camshaft*

### New E-mode

The new E mode, H / P mode and P mode can be selected to suit job needs. The new E mode can save fuel consumption compared to the previous model's P mode, yielding similar production.

## Development concept of new engine

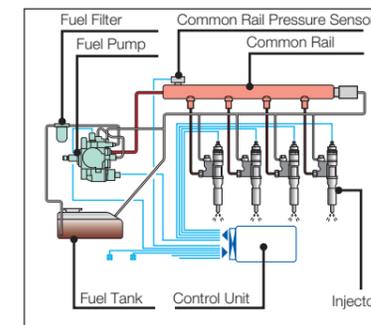
### OHC 4-Valve Engine

The new OHC 4-valve diesel engine is developed and built to comply with the rigorous Emission Regulations enforced in 2006 in U.S. and EU. This new engine contributes to environmental preservation. At the same time it realizes high durability and low fuel consumption by adopting the latest advanced engine technology.



### Common Rail Type Fuel Injection System

Electronic control common rail type fuel injection system drives an integrated fuel pump at an ultrahigh pressure to distribute fuel to each injector per cylinder through a common rail. This enables optimum combustion to generate big horsepower, and reduce PM\* (diesel plume) and fuel consumption.

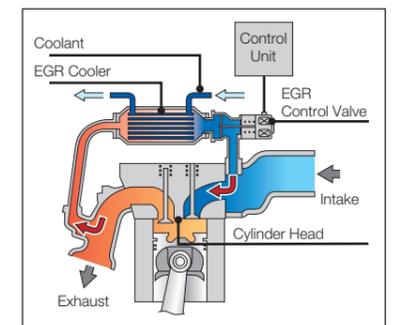


### Cooled EGR<sup>\*\*</sup> System

Exhaust gas is partially mixed with intake air to lower combustion temperature for reducing NOx and fuel consumption. What's more, the EGR cooler cools down exhaust gas to increase air concentration for complete combustion, reducing PM\* (diesel plume).

*\*Particulate Matter*

*\*\*Exhaust Gas Recirculation*



## A New Standard in Operator Comfort

The operator's seat of the MA200 gives the operator an excellent view of the jobsite. On the widescreen color LCD monitor the operator can see machine conditions. Ample legroom, short stroke levers and a large seat ensure optimum working conditions for the operator during long hours.



The MA200 cab has been redesigned to meet demands of customers. From the operator's seat the operator has an excellent view of the jobsite. On the widescreen color LCD monitor the operator can see machine conditions and with the rear view camera, what is behind the machine. Ample legroom, short stroke levers and a suspension seat with heating ensure optimum working conditions. The seat features horizontal, vertical adjustments and has a backrest contoured for comfort, with a HITACHI logo.

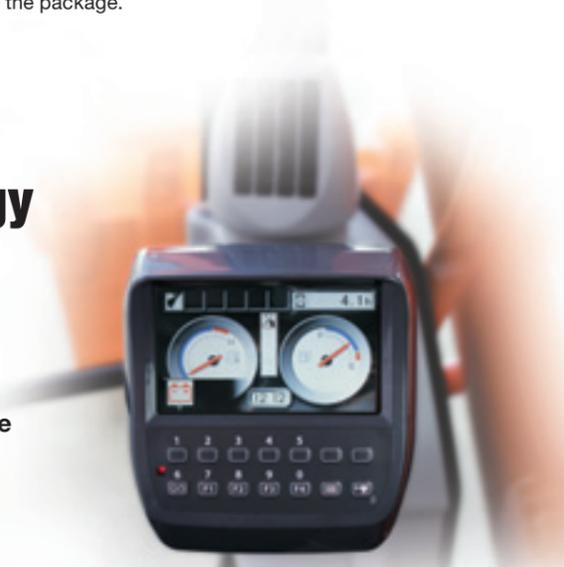


Wide adjustable armrests and a retractable seat belt are included. Short stroke levers allow for continuous operation with less fatigue. Three switches on the lever (optional) can be set to operate attachments other than buckets. The cab is pressurized to keep out dust. Noise and vibrations are kept to a minimum due to the elastic mounts, filled with silicone oil, the cab rests on.

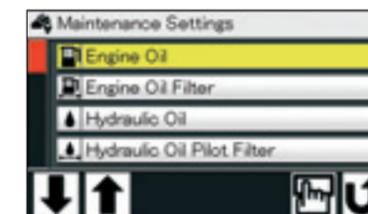
Visibility is improved especially for the right downward view. Sliding windows on the front and side enable direct communication between operator and other workers. Foot space has increased and travel pedals have been redesigned for easier operation. A flat floor allows for easy cleaning. Ergonomic controls and switches, fully automatic air conditioner and a radio complete the package.

## Embedded Information Technology

The MA200 is equipped with a widescreen color LCD monitor with adjustable contrast for day and night shifts. With the monitor the operator can check maintenance intervals, select work modes, monitor fuel consumption, and connect to the rear view camera. A theft deterrent system and multi-language selection is also available.



### Maintenance support



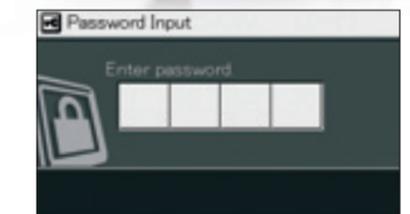
Replacement timing of hydraulic oil and fuel filters is alerted to the operator through the LCD monitor according to the schedule preset by the user each time when turning the key switch. The scheduled maintenance can prevent the failure of the machine.

### Rear view camera



The widescreen color LCD, teamed up with the rear view camera gives the operator unobstructed rearward viewing.

### Theft deterrent system



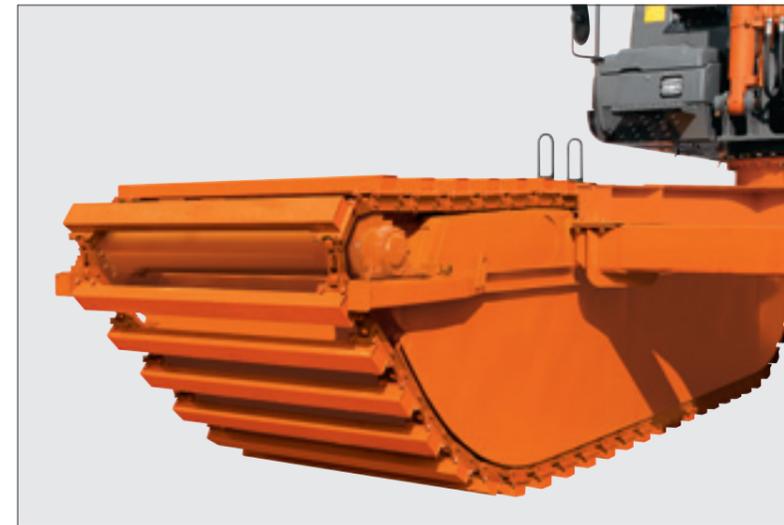
The electronic immobiliser requires the entry of a password to the multifunctional monitor each time when starting the engine to prevent theft and vandalism.

# Exceptional Mobility with Special Undercarriage

The special undercarriage, fitted with square hollow steel shoes and floating seal rollers, gives exceptional mobility on wetland and swamps. It boosts stability and ruggedness too. The machine can be easily knocked down for quick transport to the next job site, as the upperstructure is bolted to the undercarriage through the support beam, and hydraulic piping employs quick couplers.

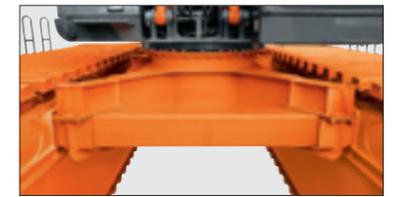


## Strengthened undercarriage



### Stable and Durability

The undercarriage is fitted with square hollow steel shoes to improve buoyancy and ruggedness for excellent mobility on terrains and swamps.



### Knock-Down Construction

The upperstructure is bolted to the undercarriage through the support beam. Hydraulic piping is connected through quick couplers. This knock-down construction is convenient for prompt transport to the next job site.

## Strengthened front attachment

The boom top bracket is strengthened by using high-tensile steel. Reinforced resin thrust plates designed to reduce noise and resist wear.

The new HN bushings, containing “solid molybdenum-based lubricant”, are utilized at the boom foot, boom-arm joint, arm cylinder and bucket cylinder mounting area for better lubrication and higher durability. (At other joints, conventional steel bushings are also utilized.)

The boom foot is enlarged for higher strength. This improvement increases the durability and reliable under heavy-duty operation.



Reinforced resin thrust plates



New HN bushing

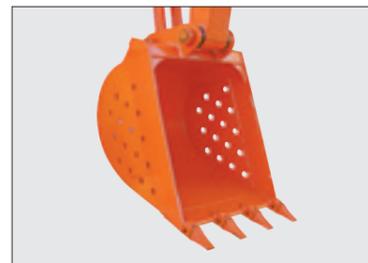
# Simplified Maintenance

The MA200 meets customer demands for simplified maintenance. Regular maintenance is the key for keeping equipment in top condition, which can help to prevent costly downtime. In addition, a regularly serviced machine has higher residual value. There are many service features to be found on the MA200.



## Specific-Purpose Bucket

The bucket is exclusively designed for productive excavation in soft ground, such as terrains, river beds, marshes, swamps and reclamation sites. The bucket pin hole is bushed for wear protection.



## Refueling Device

The refueling device with auto stop mechanism and an ample 400-liter fuel tank allows for efficient refueling with less downtime.



## Conveniently located servicing points

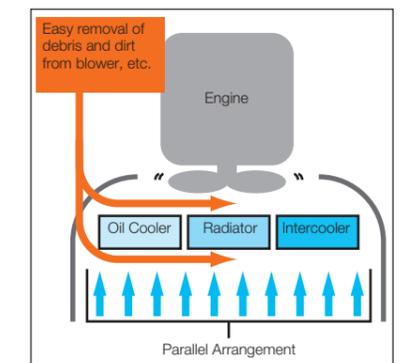


Wide doors give access to the fuel filter, water separator and engine oil filter. A large handrail, steps and anti-skid plates lead to the engine cover. The engine oil pan is fitted with a drain coupler. When draining, an associated drain hose is connected to the drain coupler. The drain coupler is reliable, avoiding oil leakage and vandalism.

The fresh air filter for the air conditioner is relocated to cab door side from conventional location behind the operator seat. This allows easy cleaning and replacement of the fresh air filter, like the air circulation filter inside the cab.

## Parallel arrangement of the cooling pack

The oil cooler, radiator and intercooler are laid out in a parallel arrangement, instead of the conventional in-line arrangement. This parallel arrangement is significantly easier to clean around the engine. The air conditioner condenser can be opened for easy cleaning of the condenser and the radiator located behind.



## Extended oil and filter change intervals

Front Pin Lubricating Intervals and Consumables Replacement		MA 200
Lubricant	Bucket	500 h
	Boom Foot	500 h
	Front	500 h
Consumables	Engine Oil	500 h
	Engine Oil Filter	500 h
	Hydraulic Oil	5 000 h
	Hydraulic Oil Filter	1 000 h
	Fuel Filter	500 h

The oil and filter change intervals have been extended considerably, reducing maintenance time and expenses. Engine oil consumption is lower. Hydraulic oil can be used up to 5 000 hours.

## Safety Features

Ensuring the safety of the operator and other workers on the jobsite is an important concern for HITACHI. That is why the MA200 has a number of safety features including a new reinforced cab and shut-off mechanisms for engine and pilot controls.

### Easy Access to the Cab

The MA200 provides quick access to the cab from either side, with the help of handrailed ladders and step behind the counterweight. This design facilitates daily servicing and inspection.



### Additional features

#### Cab right protection bars



#### Evacuation hammer



#### Engine shut-off switch



#### Pilot control shut-off lever



#### FOPS guard



(Optional)

#### Retractable seat belt



Other features include a retractable seatbelt, evacuation hammer and emergency engine shut-off switch. A shut-off lever for pilot control helps to prevent unintentional movements. In addition a Falling Object Protective Structure (FOPS) guard is optionally available. For the cab windows there is a choice of laminated or tempered glass.

## Environmental Features

HITACHI takes its responsibility when it comes to the environment.

Our production facilities have ISO 14001 certification. The HITACHI machine is lead free and has a low-noise design, therefore HITACHI customers get one of the most environmentally considerate hydraulic excavators available today.

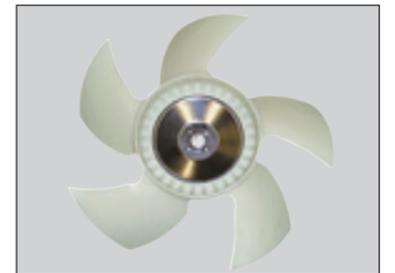
### A cleaner machine

The MA200 is equipped with a clean but powerful engine to comply with Tier 3, and Stage III A. An engine emission regulations effective in the U.S. EPA and European Union from 2006. Exhaust gas is partly re-combusted to reduce particulate matter (PM) output and lower nitrogen oxide (NOx) levels.



### A quieter machine

A number of features make this machine quieter. First, isochronous control of the engine speed means a restriction of engine speed during no-load and light-duty operation to suppress sound. Second, a fan with curved blades reduces air resistance and air flow noise. Third, a time-tested muffler suppresses engine noise significantly.



### A recyclable machine

All resin parts are marked to facilitate recycling. The machine is completely lead-free. The radiator and oil cooler are made from aluminium and all wires are lead-less.



## Parts & Service

Over the years, we have gained experience in one of the most competitive service markets in the world - Japan. Using our know-how in dealing directly with customers, we have created a worldwide support system that is highly capable.

### Parts

HITACHI only offers genuine high quality parts. We guarantee that these parts have high performance and long life. We manage around 1 000 000 types of parts all around the world. They are designed and built to be the best match for your HITACHI equipment. HITACHI has a global parts distribution network that makes sure you get what you need as quickly as possible. We have more than 150 dealers worldwide who provide the closest support for your needs.

In most cases, your dealer will have the replacement part that you require. If a dealer does not have a certain part, he can order it from four fully stocked parts depots located across the world. These distribution centres are all connected by an on-line system that gives them access to shared information on stocks, such as the number and type of available parts.

The depots, which in turn are stocked by a parts center in Japan, minimize delivery time and enable you to get your parts as efficiently and quickly as possible.

### Service

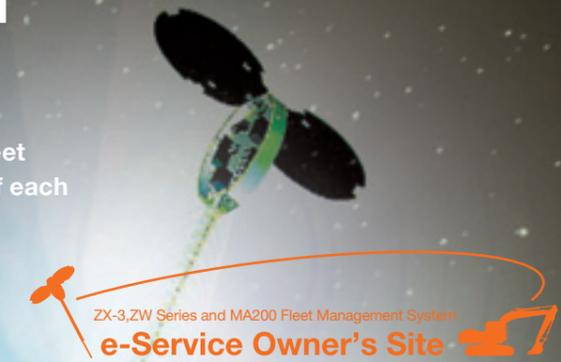
Our goal is to "keep customer equipment at a maximum performance level". To fulfil this goal, we have set more than 150 dealers all over the world. They have highly trained technicians, and provide a number of support programs. HITACHI provides a unique extended warranty program called HITACHI Extended Life Program, or HELP.

To minimize downtime during troubleshooting, we developed a PDA based diagnostic system called "Dr.ZX". To keep our customers' equipment in top running shape, good service is indispensable. We believe personnel training is the key to providing the best service.

If you would like more information regarding parts and/or service, please ask your nearest HITACHI dealer. Not all programs and/or services are available in every market or region.

## Remote fleet management with e-Service Owner's Site

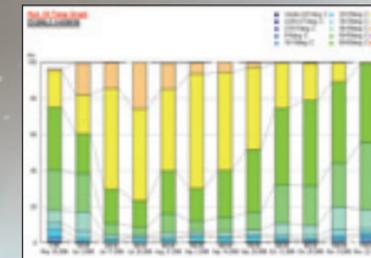
Reduce maintenance effort and costs for your machine fleet with e-Service Owner's Site; latest machine information of each of your machines available on-line, in your office.



### e-Service Owner's Site features

#### Operation

Remote access to all relevant machine operation information such as daily operating hours and machine fuel level as well as historically cumulated temperatures and pressures.



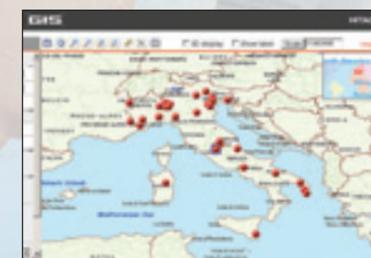
#### Maintenance

For each machine, maintenance history as well as recommended maintenance due is displayed in one view, allowing for accurate and efficient fleet maintenance management.



#### Location

In addition to any general GPS function, GIS (Geographical Information System) will not only show the geographical position of each machine with immediate serial number identification, it will also allow for dedicated multiple machine searches using specific operational information as search criteria.



Check and monitor each of your machines from your office

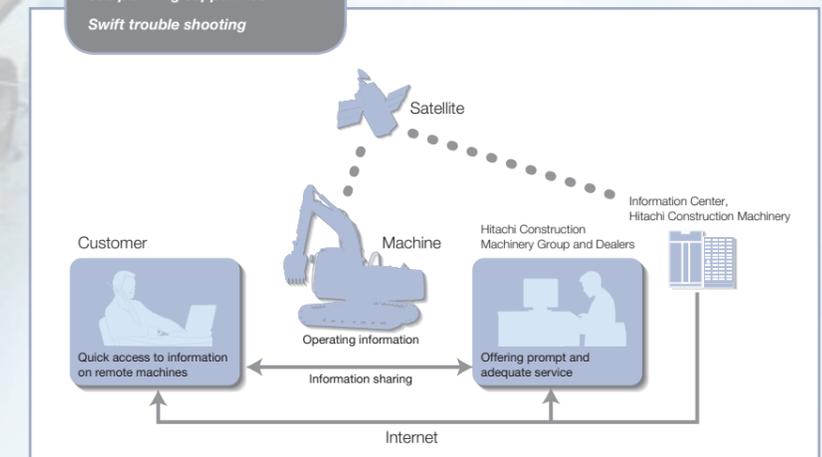
Enhanced service support from your local dealer

Actual geographical location of each of your machines

e-Service Owner's Site is an on-line fleet management tool offered by HCME to each of its customers. It will present all operational information and location of your machines on a PC in your office, giving you an up to date overview of your machines, allowing for full fleet control. Each machine will regularly send its operational data to a satellite and from there, via a ground station to a Hitachi server. The data collected in the server will then be processed and directed to each customer around the world. Your machine information will be available through a secure internet connection for you and your dealer. This communication chain is operational 24h a day, each day of the year. It will support your job planning, help you maintain your machine and allow for enhanced service and trouble shooting support by your local dealer, all directly contributing to reduce downtime and increase the cost performance of your fleet.

All new ZAXIS-3, ZW and MA200 machines supplied by HCME will have a satellite communication unit installed as standard\*, meaning each owner can directly enjoy the benefits of e-Service Owner's Site. Your local dealer will be able to give you access to e-Service Owner's Site.

Optimizing fleet management  
Accurate maintenance planning  
Job planning support tool  
Swift trouble shooting



\* (1) Satellite communication may be forbidden by the local regulatory standards (including safety standards) and legal requirements of the particular country where you wish to use it. Please contact HITACHI dealer for details.  
(2) Satellite communication basically allows for worldwide coverage. Contact your local dealer for the latest situation on actual satellite communication availability for your country or specific jobsite.  
(3) If transmission of the satellite signal is hindered in any way, satellite communication may not be possible.

# SPECIFICATIONS

## ENGINE

Model.....	Isuzu AI-4HK1X
Type.....	4-cycle water-cooled, direct injection
Aspiration.....	Turbocharged, intercooled
No. of cylinders.....	4
Rated power	
ISO 9249, net .....	122 kW (164 HP) at 2 000 min <sup>-1</sup> (rpm)
EEC 80/1269, net ...	122 kW (164 HP) at 2 000 min <sup>-1</sup> (rpm)
SAE J1349, net .....	122 kW (164 HP) at 2 000 min <sup>-1</sup> (rpm)
Maximum torque.....	655 Nm (67 kgf m) at 1 500 min <sup>-1</sup> (rpm)
Piston displacement....	5.193 L
Bore and stroke .....	115 mm x 125 mm
Batteries.....	2 x 12 V / 88 Ah

## 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 212 L/min                              |
| Pilot pump.....     | 1 gear pump                                |
| Maximum oil flow... | 30 L/min                                   |

## Hydraulic Motors

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

## Relief Valve Settings

Implement circuit.....	34.3 MPa (350 kgf/cm <sup>2</sup> )
Swing circuit.....	19.9 MPa (200 kgf/cm <sup>2</sup> )
Travel circuit.....	26.0 MPa (265 kgf/cm <sup>2</sup> )
Pilot circuit .....	3.9 MPa (40 kgf/cm <sup>2</sup> )
Power boost .....	36.3 MPa (370 kgf/cm <sup>2</sup> )

## Hydraulic Cylinders

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

## Dimensions

	Quantity	Bore	Rod diameter
Boom	2	120 mm	85 mm
Arm	1	115 mm	80 mm
Bucket	1	95 mm	85 mm

## 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.

## CONTROLS

- Pilot controls. Hitachi's original shockless valve.
- |                                 |   |
|---------------------------------|---|
| Implement levers .....          | 2 |
| Travel levers with pedals ..... | 2 |

## UPPERSTRUCTURE

### 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 ..... 13.3 min<sup>-1</sup> (rpm)

### Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO\* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat with armrests; adjustable with or without control levers.  
\* International Standardization Organization

## UNDERCARRIAGE

The special undercarriage, fitted with square hollow steel shoes and floating seal rollers, gives exceptional mobility on wetland and swamps. It boosts buoyancy and ruggedness too. The machine can be easily knocked down for quick transport to the next job site, as the upperstructure is bolted to the undercarriage through the support beam, and hydraulic piping employs quick couplers.

### Numbers of Shoes and Float Capacity on Each Side

Box type shoes ..... 55 : 49 (without wiper) + 6 (with wiper)  
Float capacity..... 29.0 m<sup>3</sup>

### Travel Device

Each track driven by axial piston motor through spur wheel double reduction gear for counterrotation of the tracks.  
Parking brake is spring-set/hydraulic-released disc type. Travel shockless relief valve built in travel motor absorbs shocks when stopping travel.  
Travel speeds..... 0 to 4.0 km/h

Maximum traction force.... 183 kN (18 700 kgf)

Gradeability ..... 58 % (30 degree) continuous

## WEIGHTS AND GROUND PRESSURE

### MA200:

Equipped with 6.50 m boom, 3.42 m arm and 0.46 m<sup>3</sup> bucket (SAE, PCSA heaped).

Shoe type	Shoe width	Operating weight	Ground pressure
Box type steel	1 620 mm	21 600 kg	11.5 kPa (0.12 kgf/cm <sup>2</sup> )

## SERVICE REFILL CAPACITIES

Fuel tank .....	400.0 L
Engine coolant .....	26.0 L
Engine oil .....	23.0 L
Swing device .....	6.2 L
Travel device (each side) .....	18.0 L
Hydraulic system.....	240.0 L
Hydraulic oil tank.....	135.0 L

# SPECIFICATIONS

## BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design. 6.50 m boom, 3.42 m arm is available.

Bucket is of welded steel structure. Side clearance adjust mechanism provided on the bucket joint bracket.

## Buckets

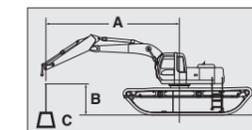
Capacity		Width	No. of teeth	Weight
SAE, PCSA heaped	CECE heaped	Without side cutters		
0.46 m <sup>3</sup>	0.4 m <sup>3</sup>	872 mm	4	250 kg
0.69 m <sup>3</sup>	0.6 m <sup>3</sup>	946 mm	-	250 kg

## TRANSPORTATION

	Qty.	Weight (kg)	Remark
① UPPERSTRUCTURE	1	7 220	Inc. boom cylinder
② UNDERCARRIAGE	2	5 650 x 2	1 unit each side
③ SUPPORT BEAM	2	380 x 2	1 unit each side
④ BOOM	1	1 280	
⑤ ARM	1	590	
⑥ BUCKET	1	250	
OTHERS	-	125	Steps, Mirrors etc

# LIFTING CAPACITIES

- Notes: 1. Without basket  
2. Lifting capacity of the MA200 does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.  
3. The load point is the center-line of the bucket pivot mounting pin on the arm.  
4. \*Indicates load limited by hydraulic capacity.  
5. 0 m = Ground.



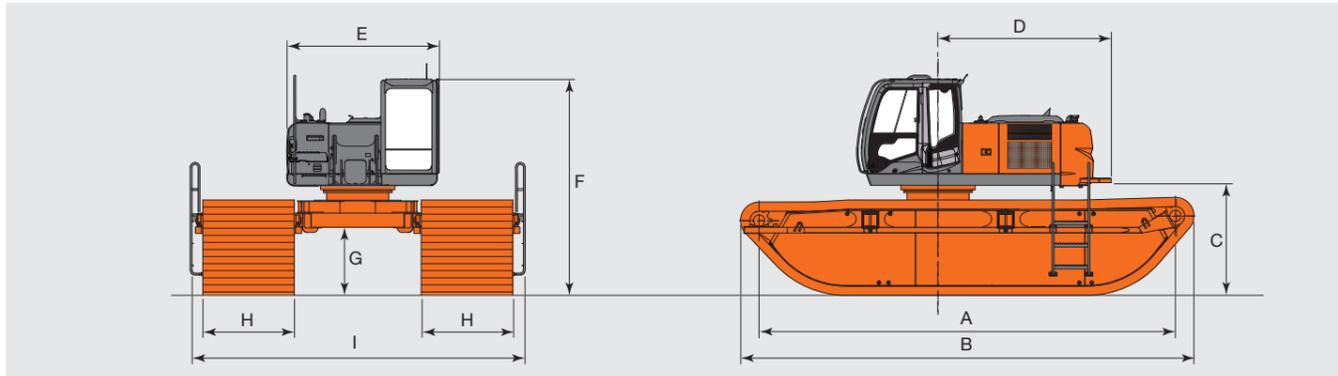
- A: Load radius  
B: Load point height  
C: Lifting capacity

Rating over-front    Rating over-side or 360 degrees    Unit: 1 000 kg

Conditions	Load point height	Load radius														At max. reach				
		2m		3m		4m		5m		6m		7m		8m		9m		meter		
Mono Boom 6.50 m Arm 3.42 m	9.0 m																	*0.94	*0.94	7.56
	8.0 m																	*0.89	*0.89	8.30
	7.0 m																	*0.86	*0.86	8.87
	6.0 m																	*0.85	*0.85	9.29
	5.0 m																	*0.85	*0.85	9.59
	4.0 m																	*0.86	*0.86	9.77
	3.0 m																	*0.88	*0.88	9.85
	2.0 m																	*0.92	*0.92	9.83
	1.0 m																	*0.98	*0.98	9.70
	0 (Ground)																	*1.06	*1.06	9.46
	-1.0 m	*2.74	*2.74	*3.59	*3.59	*5.43	*5.43	*6.75	*6.75	*5.57	*5.57	*4.72	*4.72	*4.08	*4.08	*1.59	*1.59	*1.17	*1.17	9.10
	-2.0 m	*3.79	*3.79	*4.76	*4.76	*6.81	*6.81	*6.58	*6.58	*5.47	*5.47	*4.63	*4.63	*3.96	*3.96			*1.33	*1.33	8.62
-3.0 m	*4.94	*4.94	*6.16	*6.16	*7.60	*7.60	*6.23	*6.23	*5.20	*5.20	*4.38	*4.38					*1.58	*1.58	7.97	
-4.0 m			*7.99	*7.99	*6.83	*6.83	*5.63	*5.63	*4.68	*4.68	*2.87	*2.87					*2.02	*2.02	7.12	
-5.0 m					*5.65	*5.65	*4.62	*4.62									*3.00	*3.00	5.99	

# EQUIPMENT

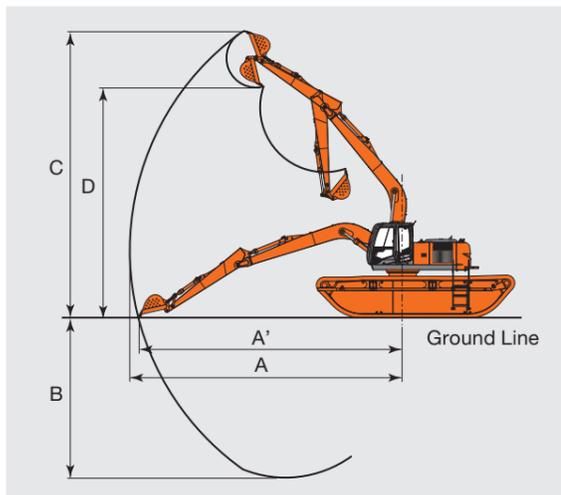
## DIMENSIONS



Unit: mm

Model	MA200
A Distance between tumblers	7 380
B Undercarriage length	8 030
C Counterweight clearance	1 940
D Rear-end swing radius	3 070
E Overall width of upperstructure	2 710
F Overall height of cab	3 830
G Min. ground clearance	1 210
H Shoe width	1 620
I Undercarriage width	5 940

## WORKING RANGES



Unit: mm

Model	MA200
A Max. digging reach	11 050
A' Max. digging reach (on ground)	10 700
B Max. digging depth	6 500
C Max. cutting height	11 600
D Max. dumping height	9 320

## Notes

- The MA200 is not a ship. It is not fitted with equipment for cruising or working on water.
- The MA200 is designed for working on soft ground. Working or traveling on hard and rough ground is prohibited.
- Avoid operating with machine floating on water.

Never attempt to work with the machine floating on water. Failure to do so may result in overturning of the machine.

## STANDARD EQUIPMENT

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

### ENGINE

- H/P mode control
- E mode control
- 50 A alternator
- Dry-type air filter with evacuator valve (with air filter restriction indicator)
- Cartridge-type engine oil filter
- Cartridge-type fuel double filters
- Air cleaner double filters
- Radiator, oil cooler and intercooler with dust protective net
- Radiator reserve tank
- Fan guard
- Isolation-mounted engine
- Auto idle system
- Fuel cooler
- Electrical fuel feed pump
- Engine oil drain coupler

### HYDRAULIC SYSTEM

- Work mode selector
- Power boost
- Auto power lift
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Swing dampener valve

### CAB

- CRES II (Center pillar reinforced structure) cab
- OPG top guard fitted Level I (ISO10262) compliant cab
- All-weather sound suppressed steel cab
- Equipped with reinforced, tinted (green color) glass windows
- 4 fluid-filled elastic mounts
- Front windows on upper, lower and left side can be opened
- Intermittent windshield wipers
- Front window washer
- Adjustable reclining seat with adjustable armrests
- Footrest
- Electric double horn
- AM-FM radio with digital clock
- Seat belt
- Drink holder
- Cigarette lighter
- Ashtray
- Storage box
- Glove compartment
- Fire extinguisher bracket
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever
- Engine shut-off switch
- Auto control air conditioner
- Transparent roof with slide curtain
- Mechanical suspension seat with heater

### MONITOR SYSTEM

- Display of meters: water temperature, hour, fuel rate, clock
- Other displays: work mode, auto-idle, glow, rearview monitor, operating conditions, etc
- Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, etc
- Alarm buzzers: overheat, engine oil pressure, overload

### LIGHTS

- 2 working lights

### UPPER STRUCTURE

- Undercover
- 650 kg counterweight
- Fuel level float
- Electric fuel refilling pump with auto stop
- Rear view camera
- Hydraulic oil level gauge
- Tool box
- Utility space
- Rear view mirror (right & left side)
- Swing parking brake

### UNDERCARRIAGE

- Travel parking brake
- Bolt-on sprocket
- 1 620 mm box type shoe

### FRONT ATTACHMENTS

- HN bushing
- Reinforced resin thrust plate
- Flanged pin
- Casted bucket link A
- Centralized lubrication system
- Dirt seal on all bucket pins
- 3.42 m arm
- 0.46 m<sup>3</sup> (SAE, PCSA heaped) bucket

### MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel refilling cap
- Skid-resistant tapes, plates and handrails
- Onboard information controller
- Theft deterrent system

## OPTIONAL EQUIPMENT

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

### CAB

- Laminated round glass window
- FOPS guard
- Air suspension seat with heater
- Rain guard
- Sun visor
- 12 V power source

### LIGHTS

- Additional cab roof front lights
- Additional cab roof rear lights
- Rotating lamp
- Additional boom light with cover

### ATTACHMENTS

- Pilot accumulator
- High mesh full flow filter with restriction indicator
- Rotary stabilizer piping

### OTHERS

- Hose rupture valve
  - Overload warning device
  - Pre-cleaner
  - Louver cover
- Designed to increase ventilation*



- Tropical cover
- Designed for use in the Tropics (severely hot climate), with extra wide opening for more heat dissipation, thus reducing sound suppression. The machine fitted with this cover cannot pass EU Noise Regulation 2000/14/EC, STAGE II, not permitting the use of the CE mark*



Prior to operating this machine, including satellite communication system, in a country other than a country of its intended use, it may be necessary to make modifications to it so that it complies with the local regulatory standards (including safety standards) and legal requirements of that particular country. Please do not export or operate this machine outside the country of its intended use until such compliance has been confirmed. Please contact your Hitachi dealer in case of questions about compliance.

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 the Operator's Manual for proper operation.



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