

ZAXIS-3 series Short-tail-swing version

HITACHI

ZAXIS
145W



WHEEL EXCAVATOR

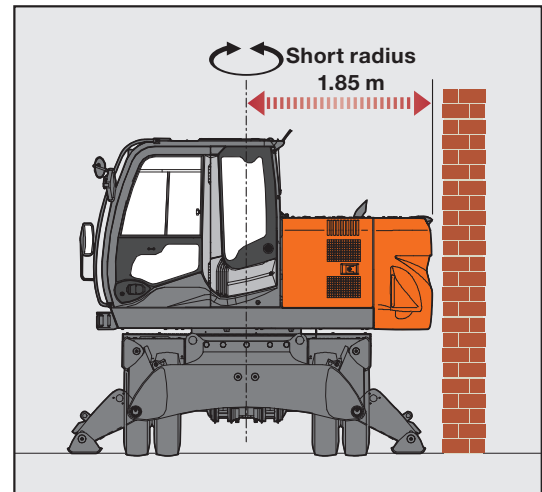
- **Model Code:** ZX145W-3
- **Engine Rated Power:** 90.2 kW (121 HP)
- **Operating Weight:** 15 700 - 16 900 kg
- **Backhoe Bucket:** SAE, PCSA Heaped: 0.19 - 0.66 m³
CECE Heaped: 0.17 - 0.55 m³

The Power to Perform

The ZAXIS-3 series is a new generation of excavators designed to provide more efficient power, productivity and improved operator comfort. By listening carefully to the wishes of the end-user, HITACHI not only understands your business, but also provides the reliable solutions you've been looking for.

NEW AND IMPROVED

- **Performance:**
 - Short 1.85 m rear-end swing radius
 - Faster travel speed
- **Comfort:**
 - Excellent driving comfort
 - Excellent visibility
 - Enhanced controllability
 - Lower noise level
- **Reduced running cost:**
 - Lower fuel consumption during both driving and working
 - Higher durability and reliability
- **New equipment:**
 - Standard satellite communication system
 - Standard rear view camera
 - Standard theft deterrent system



Power to spare

Faster travel speed
Front hydraulic suspension (optional)
Newly developed tires
New DOHC 4-valve diesel engine
Superior driving ability
Superior fuel consumption

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Operational features and functions

Short-tail-swing
New E-mode
HIOS II hydraulic system
Auto axle lock system
Brake holding system
Smooth and shockless operation
No-play disk brake
New two-piece boom
New outrigger (optional)
New blade (optional)

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Operator comfort

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

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Multi function monitor

Maintenance support
Attachment support system
Rear view camera
Theft deterrent system
Fuel consumption monitoring
Multi-language selection

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Maintenance

Conveniently located inspection points

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Solid Base

Undercarriage design
Front attachment

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Safety Features

CRES II cab
Right side view monitor (optional)
Cab right bars
Pilot control shut-off lever
Engine shut-off switch

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Environmental Features

Array of low noise mechanisms
Ecological design

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Global e-Service

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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 EU noise regulations 2000 / 14 / EC, STAGE II**



Notes: Some of the pictures in this catalog show an unmanned machine with attachments in an operating position. These were taken for demonstration purposes only and the actions shown are not recommended under normal operating conditions.

Power to spare

A new DOHC 4-valve diesel engine and new structure power train were developed for the ZAXIS-3.



Superior Drivability

Front Hydraulic Suspension (optional)

The front hydraulic suspension well absorbs shocks caused during travel, gives driving comfort and reduces operator fatigue.

Faster travel speed

38 km/h of travel speed can be performed, thanks to the efficient control with the engine and hydraulic components.*

** Travel speed may differ upon tire. Travel speed may be limited with law.*

Newly Developed Tires for More Comfortable Stability and Drivability

These new tires which were developed in cooperation with Bridgestone features an improved tread pattern and cross section form. This provides lower vibration and lower noise in driving, and even results in improved stability of the unit during operation.



Development Concept of New Engine

DOHC* 4-Valve Engine

The new DOHC 4-valve diesel engine is developed and built to comply with the rigorous Emission Regulations enforced in 2007 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.

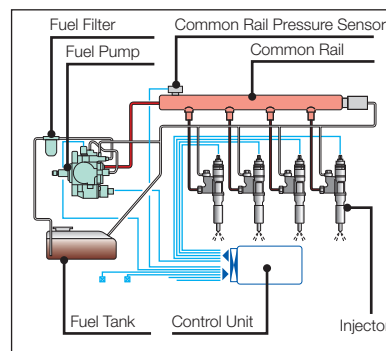
**Double Overhead camshaft*



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 large horsepower, and reduce PM* (diesel plume) and fuel consumption.

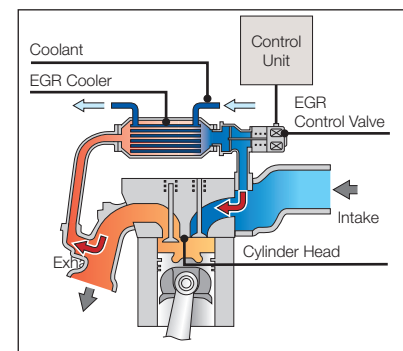
**Particulate Matter*



Cooled EGR* System

The cooled EGR system lets part of exhaust gasses mix with intake air for re-combustion to reduce oxygen concentration in the air in the combustion chamber. This design lowers combustion temperature in the cylinder, reducing fuel consumption and NOx while yielding more horsepower.

**Exhaust Gas Recirculation*



Excellent Driving Ability, Less Fuel Consumption

Superior Driving Ability

The merits of the new DOHC 4-valve engine and new power train, this unit features an increased driving ability.

Superior Fuel Consumption

The unit features a HIOS II system, which takes advantage of the most sophisticated hydraulic technology, efficiently maximizing the full performance potential of the newly developed engine. It efficiently controls the engine output and hydraulic output which results in lower fuel consumption.

Variety of outstanding operational features and functions

Short-tail-swing possible efficient operations in various confined worksites. Hydraulic system HIOS II and new DOHC 4-valve diesel engine developed specially for ZAXIS-3.



Applicable in Various Job sites with Short-Tail-Swing

Short 1850 mm rear end swing radius promises efficient operations in confined spaces.

Low Fuel Consumption and Advanced Technology for Optimizing Hydraulic Pressure

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, while yielding similar production.

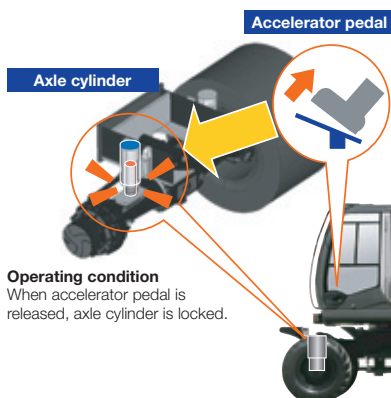
HIOS II Hydraulic System

HIOS II hydraulic system delivers higher operator satisfaction. Additionally, the new ZAXIS utilizes new system for higher margin by new ZAXIS 210 pump and improved stability.

Useful Functions of Wheel Excavator

Auto Axle Lock System

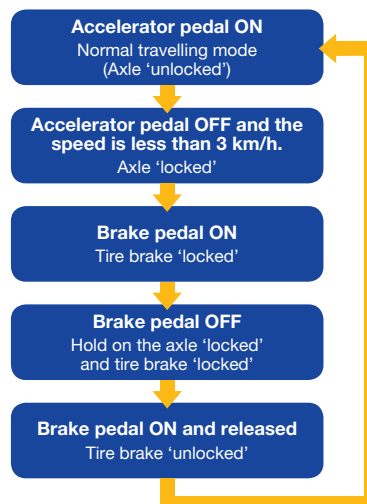
We gave the unit even a greater stability during operation by allowing the user to fix the front axle, with a function that locks the front axle cylinder. This lets you concentrate fully on operation, since the axle cylinder automatically locks when you release your foot from the accelerator and the speed is less than 3 km/h.



Brake Holding System

This system holds the lock and release of the brake along with the movement of the brake pedal. If you press the pedal down once, it holds the brake until the next time you press the pedal.

Accelerator/brake operation flow



Smooth and Shockless Operation

Yawing vibrations that occur when swing operation is stopped have been decreased by installing a swing dampener valve and shockless valve. This lets the operator smoothly and accurately stop motion at the intended place.

No-play disk brake

It utilizes no-play disk brake which holds wheel directly without play of final gear. Reliable tire lock on operating front attachment.

Improved Structure to Meet Market Needs

New Two-piece Boom

Due to the newly designed two-piece boom, we have expanded the maximum digging reach and decreased the overall height. This makes the unit more compact and stable during transportation and easier to move, yet maintains a large digging reach.

New Blade (optional)

New blade features wide and flat shaped bottom, resulting in less road surface damage and reduced mud collection.

Expansion of the Lift Amount of New Outrigger (optional)

The outriggers provide 60 mm greater lifting height compared to the conventional model. This allows ample lift up in rough conditions.

A New Standard in Operator Comfort

The operator's seat of the ZAXIS-3 series gives the operator an excellent view of the jobsite. Moreover, the widescreen color LCD monitor allows the operator to see what is behind the machine. Ample legroom, short stroke levers and a large seat ensure optimum working conditions for the operator during long shifts.



Good Visibility and Information Functions

The operator's seat gives the operator an excellent view of the jobsite and the road. Visibility is improved especially for the right downward view. Sliding windows on the front and side enable direct communication between operator and other workers. With the widescreen color LCD monitor, the operator can check machine conditions, while the rear view camera lets the operator confirm the view behind the machine.

Comfortable cab for Operator

Overall comfort is improved in order to lessen operator's fatigue. The cab has a fully automatic air-conditioning, and silicone-oil-filled shock absorbers to minimize vibration. The seat features a contoured backrest, suspension, heating, and has horizontal and vertical adjustments. A retractable seat belt is also included. Left console tilts upward enabling easy entry and exit.

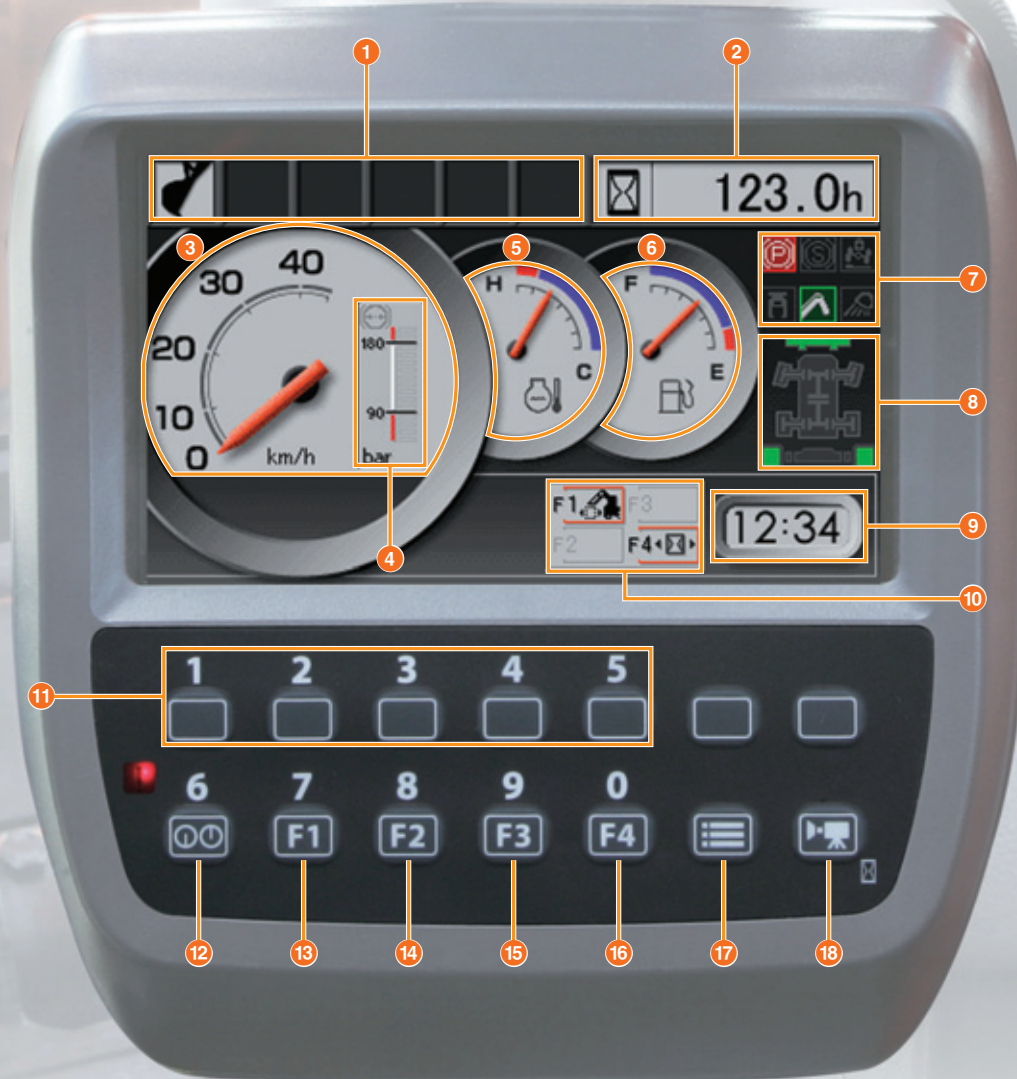
Ease of controllers

Ergonomically positioned short stroke levers ensure optimum working conditions. A built-in FNR switch provides easier forward/reverse switching during travel. Easy control to front attachment by handy analog switch. And, with the foot-operated angle adjustment lever steering tilt can be adjusted to the most comfortable position.



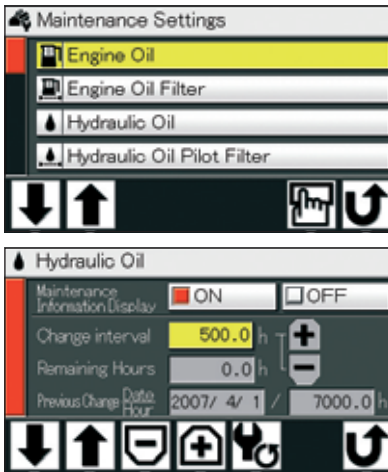
Embedded Information Technology

The ZAXIS-3 series 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, connect to the rear view camera, etc.



- | | | |
|---|--|--|
| <ul style="list-style-type: none"> 1 Display for work mode, Auto-Idle, etc. 2 Hour meter / Odometer / Trip meter 3 Speedometer / Tachometer 4 Brake oil pressure meter 5 Coolant temperature meter 6 Fuel meter 7 Display for parking brake, working brake, etc. | <ul style="list-style-type: none"> 8 Outrigger and blade operation display 9 Clock 10 Work mode / Option selector / Mail indication (optional) / Hour meter selector display 11 Function selector switch 12 Return to basic screen key 13 Work mode selector | <ul style="list-style-type: none"> 14 Option selector 15 Option selector 16 Hour meter selector 17 Menu 18 Rear view monitor selector |
|---|--|--|

Maintenance Support



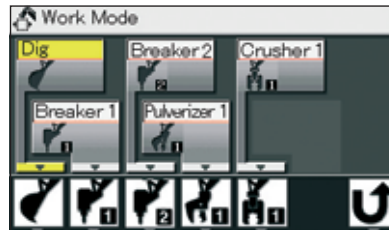
The LCD monitor provides maintenance timing alerts for the hydraulic oil and fuel filters, according to the schedule preset by the user each time the key switch is turned. Properly scheduled maintenance can prevent equipment damage and failure.

Theft Deterrent System



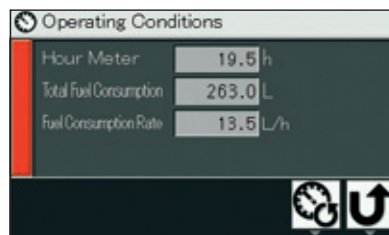
The electronic immobilizer requires the entry of an encryption code to the multifunctional monitor each time when starting the engine to prevent theft and vandalism.

Attachment Support System (work mode selector)



When replacing the attachment, oil flow adjustment can automatically be done by one touch on the work mode selection display on the LCD monitor. Minor adjustments of oil flow is possible if necessary.

Fuel Consumption Monitoring



Fuel consumption per operating hour is computed, and the result is displayed on the LCD monitor. This information suggests refuelling timing, guides energy-saving operation and efficient job management.

**The indicated values are examples and could differ from those in actual operation.*

Rear View Camera



The widescreen color LCD, in tandem with the rear view camera on the counterweight, provides a convenient view of the area behind the unit. The rear view camera automatically works when travelling backward, and can also be manually turned on with a select switch on the monitor.

Multi-language Selection



The menu allows selection from 12 languages.

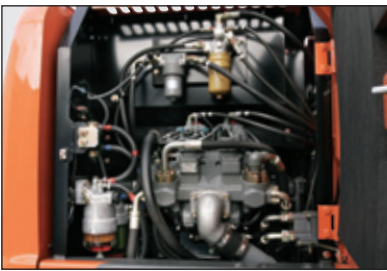
Simplified Maintenance

The ZAXIS-3 series meet 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 regular serviced machine has a higher residual value. There are many convenient service features to be found on the ZAXIS-3 series.





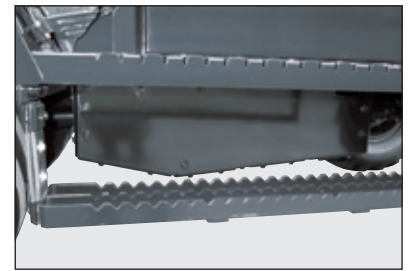
Conveniently Located Inspection Points



Wide doors give ground-level access to the fuel filter, water separator and engine oil filter. Hydraulic oil can be used up to 5 000 hours.



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, preventing oil leakage and vandalism.



The cover is newly provided for protecting dirt from entering to the transmission area. It helps cleaning ease.



The fresh air filter for the air conditioner is relocated to the cab door side from the 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.



The concentrated one-spot oil refill point for swing bearing was redesigned and located underneath the cab. This results in easier greasing and maintenance.



The unit features a large-capacity tool box with enough space to store a tin pail. The box can be used as an all-purpose storage space for storing tools and grease guns.

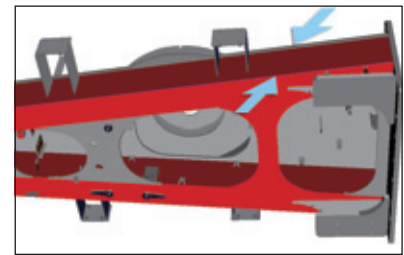
A Solid Base for a Long Life

HITACHI's technology is built on a wealth of experience and know-how from severe job sites around the world. Reinforced frame section featuring improved structure and enhanced cross-section provides greater machine durability, and the integrated transmission with rear axle realizes better performance.



Reinforced Undercarriage Design

The undercarriage which supports travelling and operation performs an important role in improving ease of operation and durability. ZAXIS-3 series utilizes a new undercarriage frame design. Enhanced cross-section delivers 38% greater vertical strength rate. Moreover, a shorter front overhang (by 294 mm) compared to the conventional ZAXIS-1 results in an improved downward view from the operator's seat and smaller turning radius with stabilizer/blade attached.



Frame cross sections is enlarged.

Strengthened Front Attachment

At arm-bucket joint, the arm top is hardened with WC thermal spraying (Tungsten-Carbide) for greater wear resistance at its contact surface with bucket, reducing jerking. Reinforced resin thrust plates are designed to reduce noise and resist wear.

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



New HN bushing



WC Thermal spraying



Reinforced resin thrust plates

Safety Features

Ensuring the safety of the operator and other workers on the jobsite is an important concern for HITACHI. That is why the ZAXIS-3 series has a number of safety features including a new reinforced cab and shut-off mechanisms for engine and pilot controls.

CRES II Cab

The CRES II cab is designed to help with “just in case” protection for the operator. Safety in case of tipping is improved. The cab top, for instance, can withstand about 2.5 times conventional load when side load is applied to the cab top until its deformation reaches 200 mm.



Withstanding load: 2.5-fold increase

Additional Features

Cab Right Bars



Evacuation Hammer



Engine Shut-off Switch



Pilot Control Shut-off Lever



OPG Top Guard, Level II



(optional)

Retractable Seat Belt



Right Side View Monitor (optional)



Other features include a retractable seat belt, evacuation hammer and an emergency engine shut-off switch. The Right Side View Monitor improves rightside visibility. The monitor can display rear-view as well as side view. A shut-off lever for pilot control helps to prevent unintentional movements. In addition a Falling Object Protective Structure (OPG top guard, Level II) guard is optionally available. For the cab windows there is a choice of laminated or tempered glass.

Environmental Features

HITACHI takes its environmental responsibility seriously. Our production facilities have ISO 14001 certification. The HITACHI machine is lead free and has a low-noise design, providing HITACHI customers with one of the most environmentally friendly hydraulic excavators available today.



A Cleaner Machine

The ZAXIS-3 series is equipped with a clean but powerful engine to comply with Tier 3, and Stage III A engine emission regulations effective in the U.S. EPA and European Union from 2007. 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. This advanced low noise design complies with the 2000 / 14 / EC, Stage II, directive effective in the European Union from 2006.



A Recyclable Machine

Over 97% of the ZAXIS-3 series can be recycled. 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. In addition, biodegradable hydraulic oil is available for jobsites where special environmental care is required.



SPECIFICATIONS

ENGINE

Model	Isuzu AI-4JJ1X
Type	4-cycle water-cooled, direct injection
Aspiration	Turbocharged, intercooled
No. of cylinders	4
Rated power	
ISO 9249, net	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
EEC 80/1269, net ..	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
SAE J1349, net	90.2 kW (121 HP) at 2 200 min ⁻¹ (rpm)
Maximum torque	402 N·m at 1 800 min ⁻¹ (rpm)
Piston displacement ..	2.999 L
Bore and stroke	95.4 mm x 104.9 mm
Batteries	2 x 12 V / 70 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 ..	135 + 180 L/min
Pilot pump	1 gear pump
Maximum oil flow ..	30.2 L/min
Steering pump	1 gear pump
Maximum oil flow ..	30.2 L/min

Hydraulic Motors

Travel	1 variable displacement axial piston motor
Swing	1 axial piston motor

Relief Valve Settings

Implement circuit	34.3 MPa (350 kgf/cm ²)
Swing circuit	32.4 MPa (330 kgf/cm ²)
Travel circuit	34.3 MPa (350 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)

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-piece boom)	2	105 mm	70 mm
Position (2-piece boom)	1	150 mm	95 mm
Arm	1	115 mm	80 mm
Bucket	1	100 mm	70 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 and quick warm-up systems built-in pilot Hydraulic warm-up control systems for engine and hydraulic oil.

Implement levers	2
Travel pedal	1
Outrigger and/or blade lever	1
Position and/or Att Pedal	1

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	13.7 min ⁻¹ (rpm)
Swing torque	34.0 kN·m (3 470 kgf·m)

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

Wheeled type undercarriage. The frame is of welded, stress-relieved structure.

Drive system: 2 speed power shift transmission and variable displacement axial piston type travel motor.

Travel speed (forward and reverse)	
Creeper speed range	0 to 2.2 km/h
Low speed range	0 to 8.6 km/h
High speed range	0 to 38 km/h
Gradeability	70% (35 degree)
Min. turning radius	6 800 mm

Axle:

All-wheel drive.

The front axle can be locked hydraulically in any position.

Oscillating front axle	+7° (without suspension)
	+5° (with suspension)

Brakes system:

Maintenance free wet-disc brakes on axle are standard.

Fully hydraulic service brake system

WEIGHTS AND GROUND PRESSURE

ZX145W-3 WITH 2-PIECE BOOM:

Equipped with 2-piece boom, 2.52 m arm and 0.50 m³ (SAE heaped) bucket.

Stabilization	Operating weight
Rear Blade	15 700 kg
Rear Outrigger	15 900 kg
Outrigger and Blade	16 700 kg
Front and Rear Outrigger	16 900 kg

BACKHOE ATTACHMENTS

Boom and arms are of welded, box-section design.

2.10 m, 2.52 m and 3.01 m arms are available for 2-piece boom.

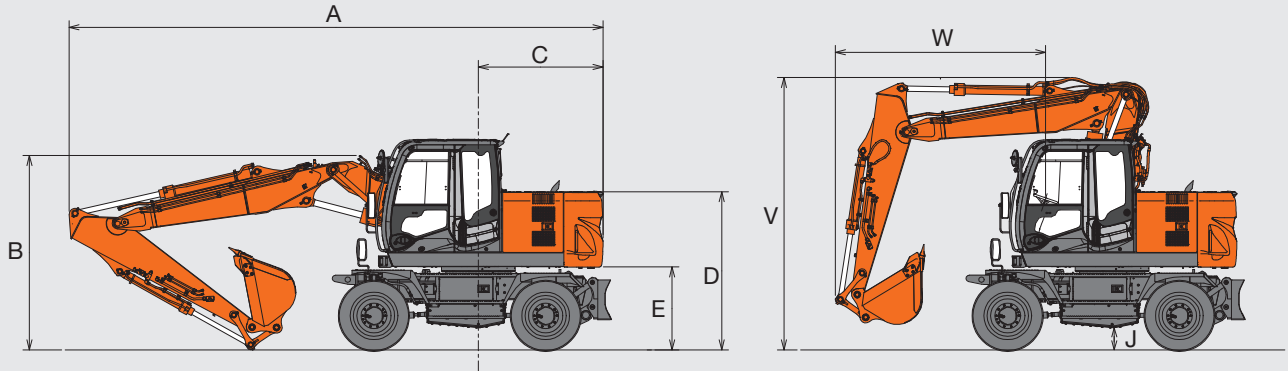
SERVICE REFILL CAPACITIES

Fuel tank	250 L
Engine coolant	18 L
Engine oil	16 L
Swing device	6.21 L
Transmission	3.0 L
Front differential gear	10.5 L
Rear differential gear	13.3 L
Hub reduction gear	
Front axle	2 x 3.6 L
Rear axle	2 x 3.5 L
Hydraulic system	180 L
Hydraulic oil tank	100 L

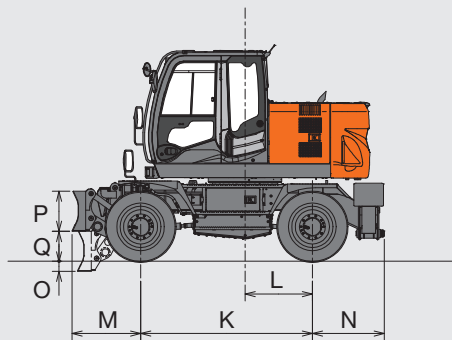
SPECIFICATIONS

DIMENSIONS

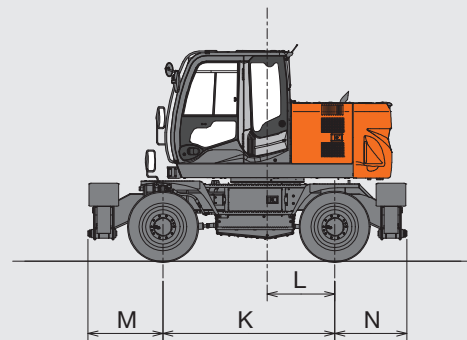
2-PIECE BOOM



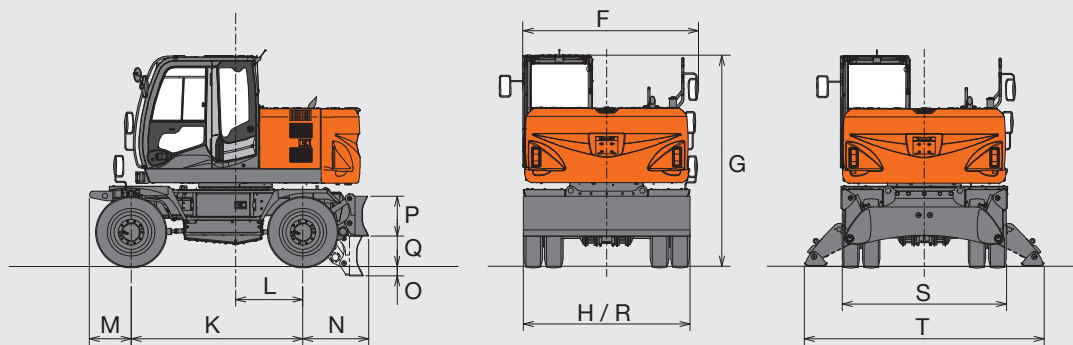
FRONT BLADE AND REAR OUTRIGGER



FRONT AND REAR OUTRIGGER



REAR BLADE



DIMENSIONS

Unit: mm

		Rear BL	Rear O/R	Front BL Rear O/R	Front O/R Rear BL	Front and Rear O/R
A	Overall length (with 2-piece boom)					
	2.10 m arm	8 050	8 140		8 050	8 140
	2.52 m arm	8 060	8 150		8 060	8 150
	3.01 m arm	8 030	8 120		8 030	8 120
B	Overall height (with 2-piece boom)					
	2.10 m arm	3 130* (3 000: Boom height)				
	2.52 m arm	3 130* (3 110: Boom height)				
	3.01 m arm	3 350				
C	Rear-end swing radius	1 850				
D	Engine cover height	2 360				
E	Counterweight clearance	1 215				
F	Overall width of upperstructure	2 480				
G	Overall height of cabin	3 130				
H	Overall width tires	2 480				
J	Min. ground clearance	320				
K	Wheel base	2 550				
L	Swing-centre to rear axle	1 000				
M	Front overhang	620		1 020	1 115	
N	Rear overhang	980	1 070		980	1 070
O	Max. blade lower	145	–	145		–
P	Height of blade	590	–	590		–
Q	Max. blade raise	445	–	445		–
R	Overall width of blade	2 530	–	2 530		–
S	Over width of O/R retract	–	2 470			
T	Overall width O/R extend	–	3 380			
V	Overall height of boom (travelling)					
	2.10 m arm	3 990				
	2.52 m arm	3 990				
	3.01 m arm	3 740				
W	Front overhang (travelling)					
	2.10 m arm	2 900				
	2.52 m arm	3 120				
	3.01 m arm	4 925				

Transportation dimensions are A, B, H (without blade) or A, B, R (with blade).

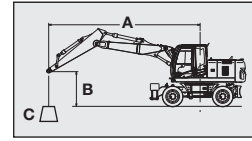
*Cabin Height.

LIFTING CAPACITIES

ZX145W-3 WITH 2-PIECE BOOM, 2.10 M ARM

Metric measure

- Notes: 1. Ratings 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% full hydraulic capacity.
 3. The load point is a hook (not standard equipment) located on the back of the bucket.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



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

Rating over front or rear

Rating over-side 360 degrees

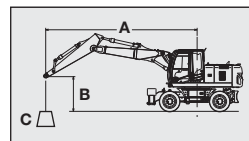
Unit: 1 000 kg

Stabilization										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m				Meter
6.0 m	Rear blade up					*3.9	3.6			*3.0	2.3	5.96
	Rear blade down					*3.9	*3.9			*3.0	2.6	
	Rear outrigger down					*3.9	*3.9			*3.0	*3.0	
	Front outrigger and rear blade down					*3.9	*3.9			*3.0	*3.0	
	Front blade and rear outrigger down					*3.9	*3.9			*3.0	*3.0	
	4 outrigger down					*3.9	*3.9			*3.0	*3.0	
4.5 m	Rear blade up			*5.8	*5.8	*4.3	3.6	*3.7	2.3	*2.8	1.8	6.81
	Rear blade down			*5.8	*5.8	*4.3	4.1	*3.7	2.7	*2.8	2.1	
	Rear outrigger down			*5.8	*5.8	*4.3	*4.3	*3.7	*3.2	*2.8	2.6	
	Front outrigger and rear blade down			*5.8	*5.8	*4.3	*4.3	*3.7	*3.7	*2.8	*2.8	
	Front blade and rear outrigger down			*5.8	*5.8	*4.3	*4.3	*3.7	*3.7	*2.8	*2.8	
	4 outrigger down			*5.8	*5.8	*4.3	*4.3	*3.7	*3.7	*2.8	*2.8	
3.0 m	Rear blade up			*6.5	6.1	*5.2	3.5	3.9	2.3	*2.7	1.6	7.25
	Rear blade down			*6.5	*6.5	*5.2	4.0	*4.0	2.7	*2.7	1.9	
	Rear outrigger down			*6.5	*6.5	*5.2	4.7	*4.0	3.2	*2.7	2.3	
	Front outrigger and rear blade down			*6.5	*6.5	*5.2	*5.2	*4.0	3.8	*2.7	*2.7	
	Front blade and rear outrigger down			*6.5	*6.5	*5.2	*5.2	*4.0	*4.0	*2.7	*2.7	
	4 outrigger down			*6.5	*6.5	*5.2	*5.2	*4.0	*4.0	*2.7	*2.7	
1.5 m	Rear blade up	*4.9	*4.9	*7.9	*6.0	5.8	3.5	3.9	2.2	2.8	1.5	7.35
	Rear blade down	*4.9	*4.9	*7.9	7.0	*5.8	4.0	*4.3	2.6	*2.9	1.8	
	Rear outrigger down	*4.9	*4.9	*7.9	*7.9	*5.8	4.7	*4.3	3.2	*2.9	2.2	
	Front outrigger and rear blade down	*4.9	*4.9	*7.9	*7.9	*5.8	5.6	*4.3	3.8	*2.9	2.7	
	Front blade and rear outrigger down	*4.9	*4.9	*7.9	*7.9	*5.8	*5.8	*4.3	3.9	*2.9	2.9	
	4 outrigger down	*4.9	*4.9	*7.9	*7.9	*5.8	*5.8	*4.3	*4.3	*2.9	*2.9	
0 m	Rear blade up	*8.2	*8.2	*9.3	6.0	5.8	3.4	3.9	2.1	2.9	1.6	7.13
	Rear blade down	*8.2	*8.2	*9.3	7.2	*6.0	4.0	*4.4	2.5	*3.2	1.9	
	Rear outrigger down	*8.2	*8.2	*9.3	8.7	*6.0	4.8	*4.4	3.0	*3.2	2.3	
	Front outrigger and rear blade down	*8.2	*8.2	*9.3	*9.3	*6.0	*5.7	*4.4	3.8	*3.2	2.8	
	Front blade and rear outrigger down	*8.2	*8.2	*9.3	*9.3	*6.0	*5.9	*4.4	3.9	*3.2	3.0	
	4 outrigger down	*8.2	*8.2	*9.3	*9.3	*6.0	*6.0	*4.4	*4.4	*3.2	*3.2	
-1.5 m	Rear blade up	*14.3	*14.3	*9.6	5.8	6.0	3.2	3.8	2.0	3.3	1.8	6.55
	Rear blade down	*14.3	*14.3	*9.6	7.0	*6.1	3.7	*4.2	2.4	*3.3	2.1	
	Rear outrigger down	*14.3	*14.3	*9.6	9.0	*6.1	4.6	*4.2	2.9	*3.3	2.6	
	Front outrigger and rear blade down	*14.3	*14.3	*9.6	*9.6	*6.1	5.8	*4.2	3.7	*3.3	3.2	
	Front blade and rear outrigger down	*14.3	*14.3	*9.6	*9.6	*6.1	6.1	*4.2	3.8	*3.3	*3.3	
	4 outrigger down	*14.3	*14.3	*9.6	*9.6	*6.1	*6.1	*4.2	*4.2	*3.3	*3.3	
-3.0 m	Rear blade up	*21.2	*21.2	*9.4	5.7	*5.3	3.0			*4.4	2.7	4.90
	Rear blade down	*21.2	*21.2	*9.4	6.9	*5.3	3.6			*4.4	3.2	
	Rear outrigger down	*21.2	*21.2	*9.4	8.9	*5.3	4.5			*4.4	4.0	
	Front outrigger and rear blade down	*21.2	*21.2	*9.4	*9.4	*5.3	*5.3			*4.4	*4.4	
	Front blade and rear outrigger down	*21.2	*21.2	*9.4	*9.4	*5.3	*5.3			*4.4	*4.4	
	4 outrigger down	*21.2	*21.2	*9.4	*9.4	*5.3	*5.3			*4.4	*4.4	

ZX145W-3 WITH 2-PIECE BOOM, 2.52 M ARM

Metric measure

- Notes: 1. Ratings 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% full hydraulic capacity.
 3. The load point is a hook (not standard equipment) located on the back of the bucket.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



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

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

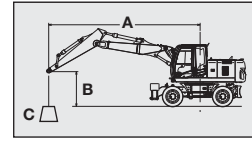
Stabilization		Reach								At max. reach		Meter
		3.0 m		4.5 m		6.0 m		7.5 m				
7.5 m	Rear blade up			*3.6	3.6					*2.8	*2.8	5.05
	Rear blade down			*3.6	*3.6					*2.8	*2.8	
	Rear outrigger down			*3.6	*3.6					*2.8	*2.8	
	Front outrigger and rear blade down			*3.6	*3.6					*2.8	*2.8	
	Front blade and rear outrigger down			*3.6	*3.6					*2.8	*2.8	
	4 outrigger down			*3.6	*3.6					*2.8	*2.8	
6.0 m	Rear blade up			*3.5	*3.5	*3.4	2.3			*2.4	2.0	6.42
	Rear blade down			*3.5	*3.5	*3.4	2.7			*2.4	2.4	
	Rear outrigger down			*3.5	*3.5	*3.4	3.2			*2.4	*2.4	
	Front outrigger and rear blade down			*3.5	*3.5	*3.4	*3.4			*2.4	*2.4	
	Front blade and rear outrigger down			*3.5	*3.5	*3.4	*3.4			*2.4	*2.4	
	4 outrigger down			*3.5	*3.5	*3.4	*3.4			*2.4	*2.4	
4.5 m	Rear blade up	*4.4	*4.4	*4.0	3.6	*3.5	2.4			*2.3	1.6	7.22
	Rear blade down	*4.4	*4.4	*4.0	*4.0	*3.5	*2.7			*2.3	1.9	
	Rear outrigger down	*4.4	*4.4	*4.0	*4.0	*3.5	3.2			*2.3	*2.3	
	Front outrigger and rear blade down	*4.4	*4.4	*4.0	*4.0	*3.5	*3.5			*2.3	*2.3	
	Front blade and rear outrigger down	*4.4	*4.4	*4.0	*4.0	*3.5	*3.5			*2.3	*2.3	
	4 outrigger down	*4.4	*4.4	*4.0	*4.0	*3.5	*3.5			*2.3	*2.3	
3.0 m	Rear blade up	*6.4	6.1	*4.9	3.5	*3.8	2.3	2.8	1.5	*2.3	1.5	7.63
	Rear blade down	*6.4	*6.4	*4.9	4.0	*3.8	*2.7	*3.0	1.8	*2.3	1.7	
	Rear outrigger down	*6.4	*6.4	*4.9	4.7	*3.8	3.2	*3.0	2.2	*2.3	2.1	
	Front outrigger and rear blade down	*6.4	*6.4	*4.9	*4.9	*3.8	3.8	*3.0	2.7	*2.3	*2.3	
	Front blade and rear outrigger down	*6.4	*6.4	*4.9	*4.9	*3.8	*3.8	*3.0	2.8	*2.3	*2.3	
	4 outrigger down	*6.4	*6.4	*4.9	*4.9	*3.8	*3.8	*3.0	*3.0	*2.3	*2.3	
1.5 m	Rear blade up	*7.8	5.9	*5.6	3.4	3.8	2.3	2.7	1.5	*2.4	1.4	7.73
	Rear blade down	*7.8	*7.0	*5.6	3.9	*4.2	*2.6	*3.4	1.8	*2.4	1.7	
	Rear outrigger down	*7.8	*7.8	*5.6	4.7	*4.2	*3.2	*3.4	2.2	*2.4	2.0	
	Front outrigger and rear blade down	*7.8	*7.8	*5.6	5.6	*4.2	3.8	*3.4	2.7	*2.4	*2.4	
	Front blade and rear outrigger down	*7.8	*7.8	*5.6	*5.6	*4.2	3.9	*3.4	2.8	*2.4	*2.4	
	4 outrigger down	*7.8	*7.8	*5.6	*5.6	*4.2	*4.2	*3.4	3.2	*2.4	*2.4	
0 m	Rear blade up	*9.0	6.0	5.8	3.4	3.9	2.1	2.7	1.4	*2.7	1.4	7.51
	Rear blade down	*9.0	7.1	*5.9	4.0	*4.3	2.5	*2.8	1.7	*2.7	1.7	
	Rear outrigger down	*9.0	8.6	*5.9	4.7	*4.3	3.1	*2.8	2.1	*2.7	2.1	
	Front outrigger and rear blade down	*9.0	*9.0	*5.9	5.6	*4.3	3.8	*2.8	2.6	*2.7	2.6	
	Front blade and rear outrigger down	*9.0	*9.0	*5.9	*5.8	*4.3	4.0	*2.8	2.7	*2.7	*2.7	
	4 outrigger down	*9.0	*9.0	*5.9	*5.9	*4.3	*4.3	*2.8	*2.8	*2.7	*2.7	
-1.5 m	Rear blade up	*9.5	5.8	*5.9	3.2	3.8	2.0			3.0	1.6	6.97
	Rear blade down	*9.5	7.0	*6.0	3.8	*4.4	2.4			*3.1	1.9	
	Rear outrigger down	*9.5	8.9	*6.0	4.7	*4.4	3.0			*3.1	2.3	
	Front outrigger and rear blade down	*9.5	*9.5	*6.0	*5.8	*4.4	3.7			*3.1	2.9	
	Front blade and rear outrigger down	*9.5	*9.5	*6.0	*5.9	*4.4	3.8			*3.1	3.0	
	4 outrigger down	*9.5	*9.5	*6.0	*6.0	*4.4	*4.4			*3.1	*3.1	
-3.0 m	Rear blade up	*9.8	5.7	*5.8	3.0					*3.6	2.1	5.69
	Rear blade down	*9.8	6.9	*5.8	3.6					*3.6	2.5	
	Rear outrigger down	*9.8	8.9	*5.8	4.5					*3.6	3.1	
	Front outrigger and rear blade down	*9.8	*9.8	*5.8	5.6					*3.6	*3.6	
	Front blade and rear outrigger down	*9.8	*9.8	*5.8	*5.8					*3.6	*3.6	
	4 outrigger down	*9.8	*9.8	*5.8	*5.8					*3.6	*3.6	

LIFTING CAPACITIES

ZX145W-3 WITH 2-PIECE BOOM, 3.10 M ARM

Metric measure

- Notes: 1. Ratings 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% full hydraulic capacity.
 3. The load point is a hook (not standard equipment) located on the back of the bucket.
 4. *Indicates load limited by hydraulic capacity.
 5. Each value with Rear blade up over the Front-axle side and each value with Rear blade down over the Rear-axle side respectively, and value in optimal position with positioning cylinder.
 6. 0 m = Ground.



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

Rating over front or rear

Rating over-side 360 degrees

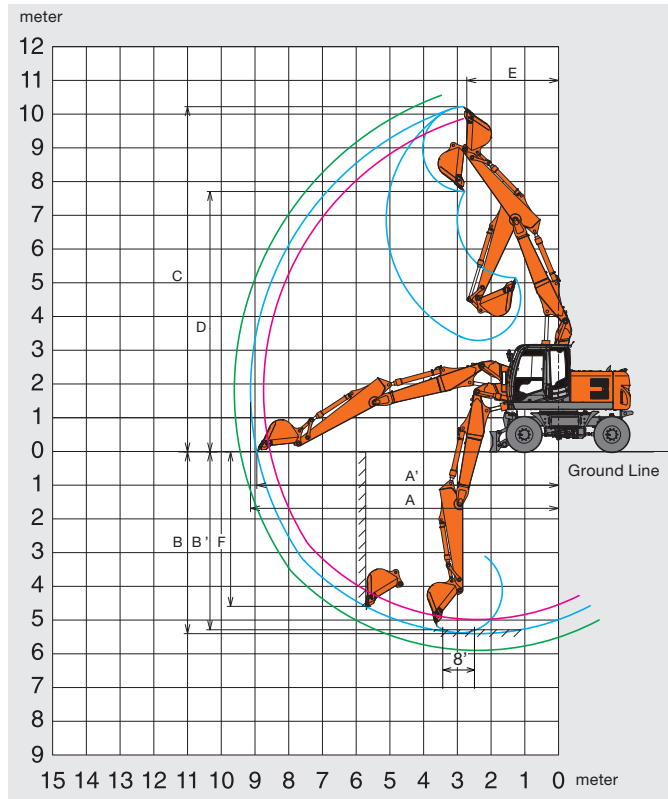
Unit: 1 000 kg

Stabilization										At max. reach		
		3.0 m		4.5 m		6.0 m		7.5 m				Meter
7.5 m	Rear blade up			*3.1	*3.1					*2.4	*2.4	5.76
	Rear blade down			*3.1	*3.1					*2.4	*2.4	
	Rear outrigger down			*3.1	*3.1					*2.4	*2.4	
	Front outrigger and rear blade down			*3.1	*3.1					*2.4	*2.4	
	Front blade and rear outrigger down			*3.1	*3.1					*2.4	*2.4	
	4 outrigger down			*3.1	*3.1					*2.4	*2.4	
6.0 m	Rear blade up			*3.1	*3.1	*3.0	2.4			*2.1	1.8	6.99
	Rear blade down			*3.1	*3.1	*3.0	2.7			*2.1	2.1	
	Rear outrigger down			*3.1	*3.1	*3.0	*3.0			*2.1	*2.1	
	Front outrigger and rear blade down			*3.1	*3.1	*3.0	*3.0			*2.1	*2.1	
	Front blade and rear outrigger down			*3.1	*3.1	*3.0	*3.0			*2.1	*2.1	
	4 outrigger down			*3.1	*3.1	*3.0	*3.0			*2.1	*2.1	
4.5 m	Rear blade up			*3.5	*3.5	*3.2	2.4	*2.6	1.6	*2.0	1.4	7.73
	Rear blade down			*3.5	*3.5	*3.2	2.7	*2.6	1.8	*2.0	1.7	
	Rear outrigger down			*3.5	*3.5	*3.2	*3.2	*2.6	2.2	*2.0	*2.0	
	Front outrigger and rear blade down			*3.5	*3.5	*3.2	*3.2	*2.6	*2.6	*2.0	*2.0	
	Front blade and rear outrigger down			*3.5	*3.5	*3.2	*3.2	*2.6	*2.6	*2.0	*2.0	
	4 outrigger down			*3.5	*3.5	*3.2	*3.2	*2.6	*2.6	*2.0	*2.0	
3.0 m	Rear blade up	*5.5	*5.5	*4.5	3.4	*3.6	*2.3	2.8	1.5	*2.0	1.3	8.11
	Rear blade down	*5.5	*5.5	*4.5	4.0	*3.6	2.7	*3.1	1.8	*2.0	1.6	
	Rear outrigger down	*5.5	*5.5	*4.5	*4.5	*3.6	3.2	*3.1	2.2	*2.0	1.9	
	Front outrigger and rear blade down	*5.5	*5.5	*4.5	*4.5	*3.6	*3.6	*3.1	2.7	*2.0	*2.0	
	Front blade and rear outrigger down	*5.5	*5.5	*4.5	*4.5	*3.6	*3.6	*3.1	2.9	*2.0	*2.0	
	4 outrigger down	*5.5	*5.5	*4.5	*4.5	*3.6	*3.6	*3.1	*3.1	*2.0	*2.0	
1.5 m	Rear blade up	*7.6	5.9	*5.4	3.4	3.8	2.3	2.7	1.5	*2.1	1.2	8.20
	Rear blade down	*7.6	6.9	*5.4	3.9	*4.0	2.7	*3.3	1.8	*2.1	1.5	
	Rear outrigger down	*7.6	*7.6	*5.4	4.6	*4.0	3.1	*3.3	2.2	*2.1	1.9	
	Front outrigger and rear blade down	*7.6	*7.6	*5.4	*5.4	*4.0	3.7	*3.3	2.7	*2.1	*2.1	
	Front blade and rear outrigger down	*7.6	*7.6	*5.4	*5.4	*4.0	3.9	*3.3	2.8	*2.1	*2.1	
	4 outrigger down	*7.6	*7.6	*5.4	*5.4	*4.0	*4.0	*3.3	3.2	*2.1	*2.1	
0 m	Rear blade up	*8.6	5.9	5.7	3.4	*3.8	2.2	2.7	1.4	*2.3	1.3	8.00
	Rear blade down	*8.6	*7.0	*5.8	3.9	*4.2	2.6	*3.3	1.7	*2.3	1.5	
	Rear outrigger down	*8.6	8.5	*5.8	4.6	*4.2	3.1	*3.3	2.1	*2.3	1.9	
	Front outrigger and rear blade down	*8.6	*8.6	*5.8	5.5	*4.2	3.8	*3.3	2.6	*2.3	*2.3	
	Front blade and rear outrigger down	*8.6	*8.6	*5.8	5.7	*4.2	*3.9	*3.3	2.8	*2.3	*2.3	
	4 outrigger down	*8.6	*8.6	*5.8	*5.8	*4.2	*4.2	*3.3	3.2	*2.3	*2.3	
-1.5 m	Rear blade up	*9.3	5.8	5.8	3.2	3.8	2.0			*2.6	1.4	7.49
	Rear blade down	*9.3	7.0	*5.9	3.8	*4.3	2.4			*2.6	1.7	
	Rear outrigger down	*9.3	8.7	*5.9	4.7	*4.3	3.0			*2.6	2.1	
	Front outrigger and rear blade down	*9.3	*9.3	*5.9	5.6	*4.3	3.7			*2.6	2.6	
	Front blade and rear outrigger down	*9.3	*9.3	*5.9	5.8	*4.3	3.9			*2.6	*2.6	
	4 outrigger down	*9.3	*9.3	*5.9	*5.9	*4.3	*4.3			*2.6	*2.6	
-3.0 m	Rear blade up	*9.7	5.7	5.9	3.0	3.7	1.9			*3.1	1.7	6.47
	Rear blade down	*9.7	6.9	*6.1	3.6	*3.9	2.3			*3.1	2.1	
	Rear outrigger down	*9.7	8.9	*6.1	4.5	*3.9	2.9			*3.1	2.6	
	Front outrigger and rear blade down	*9.7	*9.7	*6.1	5.7	*3.9	3.6			*3.1	*3.1	
	Front blade and rear outrigger down	*9.7	*9.7	*6.1	6.0	*3.9	3.8			*3.1	*3.1	
	4 outrigger down	*9.7	*9.7	*6.1	*6.1	*3.9	*3.9			*3.1	*3.1	
-4.5 m	Rear blade up	*7.7	5.5							*7.6	5.4	3.06
	Rear blade down	*7.7	6.7							*7.6	6.5	
	Rear outrigger down	*7.7	*7.7							*7.6	*7.6	
	Front outrigger and rear blade down	*7.7	*7.7							*7.6	*7.6	
	Front blade and rear outrigger down	*7.7	*7.7							*7.6	*7.6	
	4 outrigger down	*7.7	*7.7							*7.6	*7.6	

WORKING RANGES

ZX145W-3 WITH 2-PIECE BOOM

Unit: mm



Arm length	2.10 m	2.52 m	3.01 m
A Max. digging reach	8 580	8 960	9 430
A' Max. digging reach (on ground)	8 390	8 780	9 260
B Max. digging depth	4 870	5 290	5 770
B' Max. digging depth (8' level)	4 760	5 180	5 670
C Max. cutting height	9 750	10 040	10 450
D Max. dumping height	7 290	7 570	7 990
E Min. swing radius	2 520	2 670	3 040
F Max. vertical wall	4 130	4 490	4 960
Bucket digging force ISO	99 kN (10 100 kgf)		
Bucket digging force SAE: PCSA	86 kN (8 780 kgf)		
Arm crowd force ISO	73 kN (7 470 kgf)	65 kN (6 640 kgf)	58 kN (5 940 kgf)
Arm crowd force SAE: PCSA	71 kN (7 200 kgf)	63 kN (6 430 kgf)	57 kN (5 770 kgf)

EQUIPMENT

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 safety element)
- 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
- E-P control system
- Quick warm-up system for pilot circuit
- Shockless valve in pilot circuit
- Boom-arm anti-drift valve
- Brake valves for travel circuits
- Control valve with main relief valve
- Extra port for control valve
- Suction filter
- Full-flow filter
- Pilot filter
- Swing dampener valve
- Steering filter
- Outriggers are individually controlled

UPPERSTRUCTURE

- Undercover
- Fuel level float
- Hydraulic oil level gauge
- Rearview mirrors, left and right
- Swing parking brake
- Swing lock
- 120 Ah batteries

UNDERCARRIAGE

- Parking brake
- Toolbox: left chassis
- Traction types pattern tires (10.00-20 16 PR)
- Tire spacer
- 4 tie down hooks

FRONT ATTACHMENTS

- HN bushing
- WC (tungsten-carbide) thermal spraying
- Reinforced resin thrust plate
- Flanged pin
- Centralized lubrication system
- Dirt seal on all bucket pins

CAB

- CRES II (Centre Pillar Reinforced Structure) cabin
- OPG top guard fitted Level I (ISO 10262) compliant cab
- All-weather sound-suppressed steel cab
- Equipped with reinforced, tinted (green color) glass windows
- 4 fluid-filled elastic mounts
- Windows on upper, lower-front and left side can opened
- Intermittent windshield retractable wipers
- Front window washer
- Footrest
- Electric double horn
- AM - FM radio with digital clock
- Retractable seat belt
- Drink holder
- Cigar lighter
- Ashtray
- Storage box
- Glove compartment
- Floor mat
- Short wrist control levers
- Pilot control shut-off lever with tilt-up console
- Engine shut-off switch
- Auto control air conditioner
- Rain guard
- Adjustable reclining seat with adjustable armrests
- Suspension seat with heater
- Transparent roof with slide curtain
- Sun visor
- Room lamp (delay type)

LIGHTS AND SIGNALS

- Two headlights
- Working lights
- Combination lamps
- Turn signal lamps
- Brake lamps
- Clearance lamps
- Hazard lamps

MONITOR SYSTEM

- Meter:
Speedometer, Tachometer, Hour meter, Odometer, Trip meter, Engine coolant temperature gauge, Hydraulic brake pressure gauge, Fuel gauge, Clock
- Alarms:
Overheat, Engine warning, Engine oil pressure, Alternator, Minimum fuel level, Hydraulic filter restriction, Air filter restriction, Brake oil pressure, Operation signal, Operate signal is abnormal for Outrigger Blade, Operate signal is abnormal for electrical lever, Network, Work mode, Lock lever

PILOT LAMP

- Multi-monitor:
Digging mode, Auto-idle, Auto-acceleration, Engine pre-heat, Parking brake, Working brake, Axle lock, Positioning / Attachment (Breaker & crusher), Work light, Outrigger / Blade
- Column-monitor:
Turn signals, Head light high beam, Hazard warning signals, F/N/R indication, Clearance light, Pilot cut, Low speed

ALARM BUZZERS

- Front attachment operation while parking brake is on, Engine oil pressure, Engine overheat, Brake pressure, Overload, Error of electrical lever

MISCELLANEOUS

- Standard tool kit
- Lockable machine covers
- Lockable fuel filling cap
- Skid-resistant tapes, plates and handrails
- Travel direction mark on chassis frame
- Onboard information controller
- Electric fuel refilling pump

OPTIONAL EQUIPMENT

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

UNDERCARRIAGE

- Rear dozer blade
- Rear outriggers
- Front dozer blade + rear outrigger
- Front outrigger + rear dozer blade
- Front outrigger + rear outrigger
- Right toolbox
- Suspension

ATTACHMENTS

- Parts for hammer and crusher
- Hammer and crusher piping
- 2 pump combined flow assist piping
- Welded bucket link A with welded hook
- Clamshell piping
- Pilot accumulator

CAB

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

LIGHT

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

OTHERS

- Hose rupture valve
- Pre-cleaner
- Biodegradable oil
- High-performance full flow filter (with restriction indicator)
- Heavier counterweight

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.