

ZAXIS-6 series

HITACHI

Reliable solutions

# SLIDING ARM

A P P L I C A T I O N   &   A T T A C H M E N T



## ZAXIS135us

Model Code	ZX135US-6
Engine Rated Power	78.5 kW (ISO 14396)
Operating Weight	15 000 - 15 600 kg
Bucket ISO heaped	0.36 m <sup>3</sup>

# DEMAND PERFECTION

Hitachi has developed the ZX135US-6 with a sliding arm mechanism specifically for deep excavation projects in confined spaces. It can dig deeper and has a significantly smaller footprint than a 30-tonne standard model. This makes it the perfect machine for urban and road construction projects, and particularly the installation of pipes for utilities.



## High quality

Only the best design elements and materials.



## Lifetime reliability

Reliable components help to prevent oil leaks.



## Ultimate durability

Robust sliding structure resists wear.





**Compact design**

Digs deeper than larger models in smaller workspaces.



**Optimum performance**

Remote monitoring with Global e-Service online application.



**User-friendly**

Safety comes first with handrails and a reinforced safety platform.



**Low emissions**

SCR system reduces NOx from exhaust gas.



**Low fuel consumption**

7% fuel saving in PWR mode (5% in ECO mode).



**Easy maintenance**

Sliding plates are easy to replace.



**Excellent efficiency**

HIOS IV reduces total hydraulic loss.



**Superior control**

Exclusive hydraulic circuit enables smooth operation.





# POWERFUL PERFORMANCE

Hitachi has utilised its excavator manufacturing expertise to address the need for powerful machines capable of working in confined spaces. The ZX135US-6 with sliding arm has been developed in-house as a compact alternative to larger models, capable of digging further and with a significantly smaller footprint. It will complete excavation tasks quickly and efficiently, enabling projects to be executed safely and on schedule.

## Powerful versatility

The upper arm features a built-in sliding cylinder with a 2,000mm stroke. With a maximum digging depth of 7,790mm, it has an extended working range compared with similar-sized machines and is ideal for river maintenance, pipeline constructions and building mine shafts.

## Superior control

The robust sliding structure supports the arm movement to prevent jolting and ensure a smooth operation. The controlled

combined operation of boom and arm, and exclusive Hitachi hydraulic circuit, is ideal for slope finishing.

## Easy maintenance

Lubrication points on the sliding structure increase reliability and contribute to easy maintenance. The nylon sliding plates can be replaced quickly and conveniently.



The sliding arm extends the working range of the ZX135US-6.



Short swing radius ensures the ZX135US-6 fits perfectly in small spaces.



Combined operation of boom and arm enables smooth slope finishing.

# SPECIFICATIONS

## ENGINE

Model .....	Isuzu AR-4JJ1X
Type .....	4-cycle water-cooled, common rail direct injection
Aspiration .....	Variable geometry turbocharged, intercooled, cooled EGR
Aftertreatment .....	DOC and SCR system
No. of cylinders .....	4
Rated power	
ISO 14396 .....	78.5 kW at 2 000 min <sup>-1</sup>
ISO 9249, net .....	74.9 kW at 2 000 min <sup>-1</sup>
SAE J1349, net .....	74.9 kW at 2 000 min <sup>-1</sup>
Maximum torque .....	375 Nm at 1 800 min <sup>-1</sup>
Piston displacement .....	2.999 L
Bore and stroke .....	95.4 mm x 104.9 mm
Batteries .....	2 x 12 V / 58 Ah

## HYDRAULIC SYSTEM

### Hydraulic Pumps

Main pumps .....	2 variable displacement axial piston pumps
Maximum oil flow .....	2 x 117 L/min
Pilot pump .....	1 gear pump
Maximum oil flow .....	33.6 L/min

### Hydraulic Motors

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

### Relief Valve Settings

Implement circuit .....	34.3 MPa
Swing circuit .....	32.3 MPa
Travel circuit .....	34.3 MPa
Pilot circuit .....	3.9 MPa
Power boost .....	36.3 MPa
Sliding arm (bottom) .....	27.9 MPa

### Hydraulic Cylinders

	Quantity	Bore	Rod diameter
Boom	2	105 mm	70 mm
Arm	1	115 mm	80 mm
Bucket	1	100 mm	70 mm
Sliding arm	1	75 mm	50 mm

## UPPERSTRUCTURE

### Revolving Frame

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. Swing parking brake is spring-set/hydraulic-released disc type.

Swing speed .....	13.7 min <sup>-1</sup>
Swing torque .....	33 kNm

### Operator's Cab

Independent spacious cab, 1 005 mm wide by 1 675 mm high, conforming to ISO\* Standards.

\* International Organization for Standardization

## 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 roller .....	1
Lower rollers .....	7
Track shoes .....	44
Track guard .....	1

### Travel Device

Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type. Automatic transmission system: High-Low.

Travel speeds .....	High : 0 to 5.5 km/h
	Low : 0 to 3.3 km/h

Maximum traction force .....	117 kN
------------------------------	--------

Gradeability .....	70% (35 degree) continuous
--------------------	----------------------------

## SOUND LEVEL

Sound level in cab according to ISO 6396 ..... LpA 69 dB(A)

External sound level according to ISO 6395 and

EU Directive 2000/14/EC ..... LwA 99 dB(A)

## SERVICE REFILL CAPACITIES

Fuel tank .....	220.0 L
Engine coolant .....	21.0 L
Engine oil .....	17.0 L
Swing device .....	3.2 L
Travel device (each side) .....	4.0 L
Hydraulic system .....	155.0 L
Hydraulic oil tank .....	60.0 L
DEF/AdBlue® tank .....	13.0 L

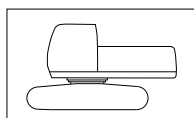
## WEIGHTS AND GROUND PRESSURE

### Operating Weight and Ground Pressure

		ZAXIS 135US	
Boom type		Monoblock	
Shoe type	Shoe width	kg	kPa
Triple grouser	500 mm	15 100	48
	600 mm	15 300	41
	700 mm	15 600	36
Pad	500 mm	15 000	48

Including 0.36 m<sup>3</sup> (ISO heaped) bucket weight (345 kg) and counterweight (4 300 kg).

### Basic Machine Weight and Overall Width



Excluding front end attachment, fuel, hydraulic oil and coolant etc. Including counterweight.

#### ZAXIS 135US

		ZAXIS 135US	
Shoe type	Shoe width	Weight	Overall width
Triple grouser	500 mm	12 000 kg	2 490 mm
	600 mm	12 200 kg	2 590 mm
	700 mm	12 500 kg	2 690 mm
Pad	500 mm	11 900 kg	2 490 mm

### Components Weight

	Weight
Counterweight	4 300 kg
Monoblock boom (with arm cylinder and boom cylinder)	1 320 kg
Sliding Arm (with bucket cylinder, A-rink and B-rink)	1 290 kg
Bucket 0.36 m <sup>3</sup>	345 kg

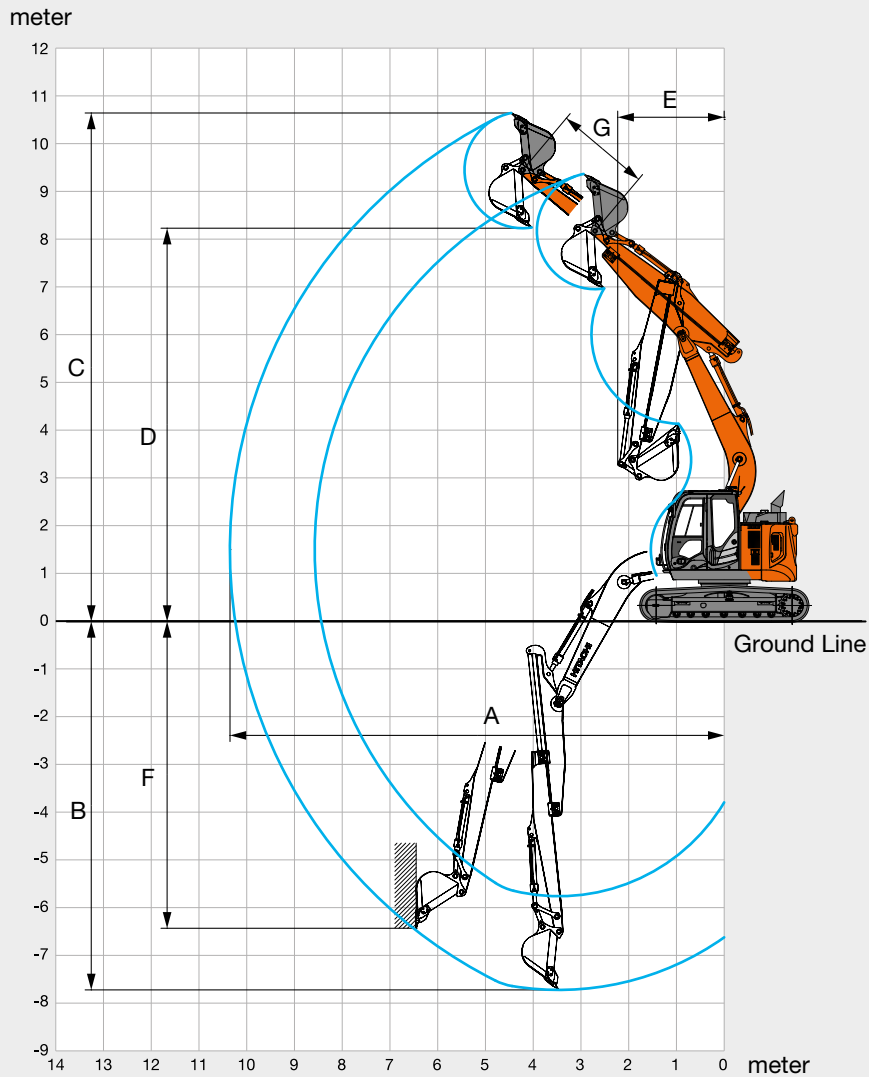
## BUCKET AND ARM DIGGING FORCE

		ZAXIS 135US	
Arm length	2.84 m (Sliding minimum)	4.84 m (Sliding maximum)	
Bucket digging force ISO	99 kN		
Bucket digging force SAE : PCSA	86 kN		
Arm crowd force ISO	61 kN	40 kN	
Arm crowd force SAE : PCSA	59 kN	39 kN	

Sliding arm can not be used at power boost.

# SPECIFICATIONS

## WORKING RANGES: MONOBLOCK BOOM



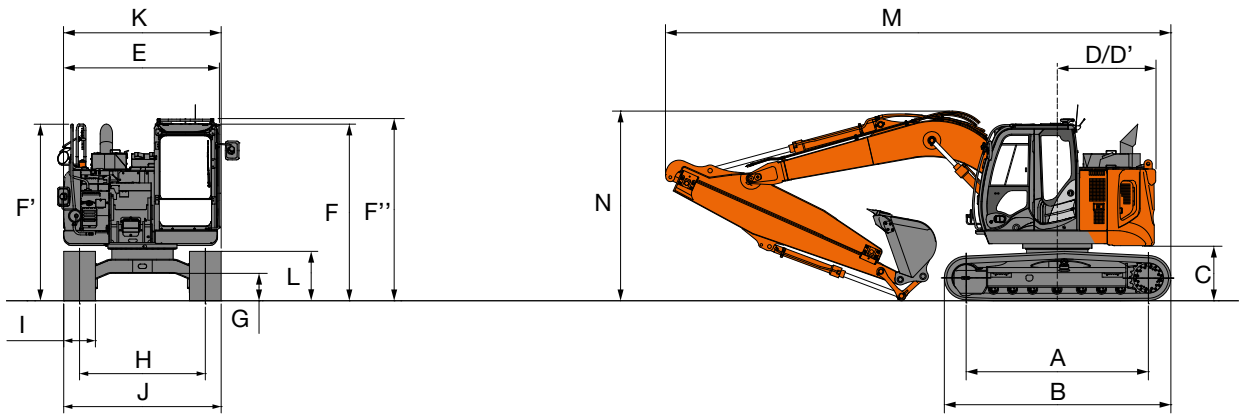
Unit: mm

	ZAXIS 135US
	Monoblock boom
Arm length	4.84 m (Sliding maximum)
A Max. digging reach	10 450
B Max. digging depth	7 790
C Max. cutting height	10 750
D Max. dumping height	8 310
E Min. swing radius	2 250
F Max. vertical wall digging depth	6 490
G Slide stroke	2 000

Excluding track shoe lug



## DIMENSIONS



Unit: mm

	ZAXIS 135US
A Distance between tumblers	2 880
B Undercarriage length	3 580
*C Counterweight clearance	840
D Rear-end swing radius	1 490
D' Rear-end length	1 490
E Overall width of upperstructure	2 480
F Overall height of cab	2 790
F' Overall height of handrail	2 870
F'' Overall height of handrail (on cab)	2 870
*G Min. ground clearance	410
H Track gauge	1 990
I Track shoe width	500 (Grouser Shoe)
J Undercarriage width	2 490
K Overall width	2 490
*L Track height with triple grouser shoes	790
M Overall length	7 970
N Overall height of boom	2 990

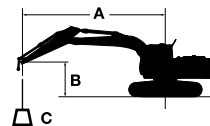
\* Excluding track shoe lug

# LIFTING CAPACITIES

Notes: 1. Ratings are based on ISO 10567.

2. Lifting capacity 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.
6. Never attempt to carry out lifting operation with extending the sliding arm.

For lifting capacities, subtract bucket and quick hitch weight from lifting capacities.



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

## ZAXIS 135US MONOBLOCK BOOM

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

Conditions	Load point height m	Load radius										At max. reach		
		1.5 m		3.0 m		4.5 m		6.0 m		7.5 m				meter
Boom 4.60 m	6.0					*2 870	*2 870					*2 140	*2 140	5.86
Sliding arm 2.84 m (minimum reach)	4.5					*3 070	*3 070	*2 920	2 230			*1 990	1 750	6.78
Counterweight 4 300 kg	3.0			*5 070	*5 070	*3 730	3 400	*3 150	2 100			*1 970	1 470	7.27
Shoe 500 mm	1.5			*7 310	5 500	*4 550	3 010	3 040	1 930			*2 070	1 350	7.43
	0 (Ground)			*6 730	4 970	4 480	2 720	2 900	1 790			2 190	1 350	7.26
	-1.5			*7 770	4 900	4 360	2 620	2 840	1 740			2 420	1 490	6.76
	-3.0	*7 750	*7 750	*6 500	5 060	*4 400	2 680					*3 000	1 900	5.83
	-4.5			*3 830	*3 830									

# EQUIPMENT

● : Standard equipment

○ : Optional equipment

## ENGINE

Aftertreatment device	●
Air cleaner double filters	●
Alternator 50 A	●
Auto idle system	●
Auto shut-down control	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
Cold fuel resistance valve	○
DEF/AdBlue® tank inlet strainer and extension filler	●
DEF/AdBlue® tank with ISO magnet adapter	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Dust-proof indoor net	●
ECO/PWR mode control	●
Electrical fuel feed pump	●
Engine oil drain coupler	●
Expansion tank	●
Fan guard	●
Fuel cooler	●
Fuel pre-filter with water separator	●
Isolation-mounted engine	●
Maintenance free pre-cleaner	○
Radiator, oil cooler and intercooler	●

## HYDRAULIC SYSTEM

Auto power lift	●
Control valve with main relief valve	●
Extra port for control valve	●
Full-flow filter	●
High mesh full flow filter with restriction indicator	○
Hose rupture valve for arm	●
Hose rupture valve for boom	●
Pilot filter	●
Suction filter	●

## CAB

All-weather sound suppressed steel cab	●
AM-FM radio	●
Ashtray	●
Auto control air conditioner	●
AUX terminal and storage	●
Cigarette lighter 24 V	●
CRES V (Center pillar reinforced structure) cab	●
Drink holder with hot & cool function	●
Electric double horn	●
Engine shut-off switch	●
Equipped with reinforced, tinted (green color) glass windows	●
Evacuation hammer	●
Floor mat	●
Footrest	●
Front window washer	●
Glove compartment	●
Hot & cool box	●
Intermittent windshield wipers	●
Key cylinder light	●
Laminated round glass window	○
OPG front guard Level II (ISO10262) compliant cab	○
OPG top guard Level I (ISO10262) compliant cab	●
OPG top guard Level II (ISO10262) compliant cab	○
Pilot control shut-off lever	●
Power outlet 12 V	○
Rain guard	○
Retractable seat belt	●
ROPS (ISO12117-2) compliant cab	●
Rubber radio antenna	●
Seat : air suspension seat with heater	●
Seat adjustment part : backrest, armrest, height and angle, slide forward / back	●
Short wrist control levers	●
Sun visor (front window/side window)	○
Transparent roof with slide curtain	●
Windows on front, upper, lower and left side can be opened	●
2 speakers	●
4 fluid-filled elastic mounts	●

## MONITOR SYSTEM

Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, SCR system trouble, etc	●
Alarm buzzers: overheat, engine oil pressure, overload, SCR system trouble	●
Display of meters: water temperature, hour, fuel rate, clock, DEF/AdBlue® rate	●
Other displays: work mode, auto-idle, glow, rearview monitor, operating conditions, etc	●
Side view monitor	●
32 languages selection	●

## LIGHTS

Additional boom light with cover	○
Additional cab roof front lights	○
Additional cab roof rear lights	○
Rotating lamp	○
2 working lights	●

## UPPER STRUCTURE

Batteries 2 x 58 Ah	●
Battery disconnect switch	●
Body top handrail	●
Counterweight 4 300 kg	●
Electric fuel refilling pump with auto stop and filter	●
Fuel level float	●
Hydraulic oil level gauge	●
Lockable fuel refilling cap	●
Lockable machine covers	●
Lockable tool box	●
Platform handrail	●
Rear view camera	●
Rear view mirror (right & left side)	●
Side view camera	●
Skid-resistant plates and handrails	●
Swing parking brake	●
Undercover	●

## UNDERCARRIAGE

Bolt-on sprocket	●
Reinforced track links with pin seals	●
Shoe: 500 mm triple grouser	●
Track undercover	○
Travel direction mark on track frame	●
Travel motor covers	●
Travel parking brake	●
Upper and lower rollers	●
1 track guard (each side) and hydraulic track adjuster	●
2 track guards (each side) and hydraulic track adjuster	○
4 tie down brackets	●

## FRONT ATTACHMENTS

Casted bucket link A	●
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Reinforced resin thrust plate	●
WC (tungsten-carbide) thermal spraying	●
Welded bucket link A with welded hook	○

## ATTACHMENTS

Sliding arm piping	●
Pilot accumulator	○

## MISCELLANEOUS

Global e-Service	●
Onboard information controller	●
Standard tool kit	●

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.

