



GREEN POWER  
OPERATED PLANT HIRE

# ZAXIS 85USB Product Brochure

ZAXIS 6 SERIES

# HITACHI

Reliable solutions

## ZAXIS85USB



### HYDRAULIC EXCAVATOR

Model code : ZX85USB-6

Engine rated power : 42.4 kW (ISO14396)

Operating weight :

MONOBLOCK BOOM : 8 430 – 8 650 kg      2-PIECE BOOM : 8 850 – 9 060 kg

Bucket ISO heaped : 0.28 m<sup>3</sup>

# ZX85USB-6

## The compact excavator



6. Powerful performance

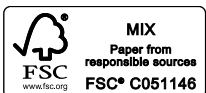


8. Exceptional comfort



10. Easy to maintain

## No compromise





# Perfect fit

One of the largest models in the Hitachi compact excavator range, the ZX85USB-6 is equipped with a powerful 42.4 kW Stage V-compliant engine and muffler filter after-treatment device to reduce emissions. Ideal for a wide variety of projects, including rental, utilities, foundation work, landscaping, and indoor demolition and construction, it offers exceptional stability and comfort, and is easy to maintain.



## Improved performance

The greater engine output and hydraulic pump torque enhances efficiency.



## Short-tail swing radius

The short-tail model with swing boom is ideal for confined spaces. The optional two-piece boom extends the excavator's reach.



**Ultimate comfort**

The heated air suspension seat is ideal in cold climates and absorbs vibration during operation which minimises operator fatigue.



**Enhanced durability**

LED lights on the cab and boom last longer than halogen alternatives.



**Added safety**

The battery disconnect switch ensures maintenance can be carried out safely.



**Easy maintenance**

Large easy-to-open covers provide access to service points.

# Powerful performance

Designed to maintain high levels of productivity with an impressive lifting capacity, the ZX85USB-6 has also been developed with several innovative features that reduce fuel consumption and emissions. It can be relied upon to deliver a productive and efficient performance.

## Efficient productivity

The ZX85USB-6 delivers high levels of productivity on the job site thanks to a powerful Stage V-compliant engine, quick cycle time and an efficient hydraulic system. The EGR and muffler filter reduce NOx and particulate matter, and a common rail system helps the engine to run optimally. This not only reduces emissions, but also contributes to greater fuel efficiency and reduced running costs.

## Built to last

Durable features of the ZX85USB-6, such as the reinforced mainframe, ensure a reliable performance, helping you to get the job done on time and on budget.

## Lower fuel costs

The ECO mode and auto idle features significantly reduce fuel consumption and noise levels.



The short-tail swing radius makes the ZX85USB-6 for working in tight spaces.



Quick cycle time and efficient hydraulics ensure high productivity.



Large color multifunctional LCD monitor shows data at a glance.





A clear view from the cab.



The USB power outlet is useful for charging portable devices such as mobile phones.



# Exceptional comfort

The cab of the ZX85USB-6 has been designed to exceed expectations. Spacious and comfortable, it offers excellent all-round visibility of the job site, and is fitted with user-friendly controls to ensure a smooth operation.

## Spacious cab

The ROPS-compliant pressurised cab of the ZX85USB-6 is spacious and easy to access via the entrance step. Fitted with the heated air suspension seat, which is ideal in cold climates and absorbs vibration during operation, the ZX85USB-6 provides a high level of comfort for operators.

## Easy operation

User-friendly controls are in easy reach of the operator and the hydraulic pilot control levers ensure a smooth operation. The optional auxiliary function lever with proportional switch allows for excellent control and is useful for hydraulic breaker attachments, among others.

## Enhanced design

The ZX85USB-6 is equipped with new LED lights, which have a longer lifetime than halogen alternatives for efficient energy use. An additional LED light on the rear of the cab is also available as an option.



The sun visor reduces glare from the sun and enhances visibility.

# Easy to maintain

The ZX85USB-6 incorporates several time-saving features that ensure routine maintenance is carried out with minimum disruption to the working day. Components are easier to access for checking and replacing, and several items are easier to clean thanks to the excavator's unique design.

## Convenient access

Components such as fuel filters, the engine oil filter and air cleaner are easily accessible from ground level. The filters and water separator are positioned close to one another for convenience. Non-slip steps ensure safe access to the machine's upper structure.

## Quick refuelling

The standard electric fuel refilling unit enables the excavator to be refuelled using an electric pump from a drum can. The in-built filter prevents impurities from the drum from entering the machine during refuelling.

## Easy cleaning

The radiator front is fitted with a dust-proof indoor net, which can swing out for quick cleaning. The X-beam track top is inclined steeply to let mud slide away smoothly.



Daily inspection points are grouped together for convenience.



Easy to open covers provide quick access.



The excavator can be refuelled using an electric pump.

# SPECIFICATIONS

## ENGINE

Model .....	4TNV98C
Type .....	4-cycle water-cooled, common rail direct injection
Aspiration .....	Coold EGR
Aftertreatment .....	Muffler filter
No. of cylinders .....	4
Rated power	
ISO 14396 .....	42.4 kW at 2 000 min <sup>-1</sup>
ISO 9249, net .....	41.8 kW at 2 000 min <sup>-1</sup>
SAE J1349, net .....	41.8 kW at 2 000 min <sup>-1</sup>
Maximum torque .....	233.4 Nm at 1 300 min <sup>-1</sup>
Piston displacement .....	3.318 L
Bore and stroke .....	98 mm x 110 mm
Battery .....	2 x 12 V / 52 Ah

## HYDRAULIC SYSTEM

### Hydraulic Pumps

Main pumps .....	3 variable displacement axial piston pumps
Maximum oil flow .....	2 x 72 L/min
.....	1 x 56 L/min
Pilot pump .....	1 gear pump
Maximum oil flow .....	20.0 L/min

### Hydraulic Motors

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

### Relief Valve Settings

Implement circuit .....	26.0 MPa (265 kgf/cm <sup>2</sup> )
Swing circuit .....	26.5 MPa (270 kgf/cm <sup>2</sup> )
Travel circuit .....	31.4 MPa (320 kgf/cm <sup>2</sup> )
Pilot circuit .....	3.9 MPa (40 kgf/cm <sup>2</sup> )

### Hydraulic Cylinders

	Quantity	Bore	Rod diameter	Stroke
Boom	1	115 mm	65 mm	885 mm
Arm	1	95 mm	60 mm	900 mm
Bucket	1	85 mm	55 mm	730 mm
Blade	1	120 mm	70 mm	145 mm
Boom swing	1	110 mm	60 mm	563 mm
Positioning	2	110 mm	60 mm	432 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 .....	10.5 min <sup>-1</sup> (rpm)
Swing torque .....	16.6 kNm (1 630 kgfm)

### Operator's Cab

Independent spacious cab, 1 065 mm wide by 1 655 mm high, conforming to ISO\* Standards. Reinforced glass windows on 4 sides for visibility. Front windows (upper and lower) can be opened. Reclining seat.  
\* International Organization for Standardization

## UNDERCARRIAGE

### Tracks

Tractor-type undercarriage. Welded track frame using selected materials. Side frame welded to track frame.

### Numbers of Rollers on Each Side

Upper roller .....	1
Lower rollers .....	5
Track shoes .....	40

### 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 5.0 km/h
.....	Low : 0 to 3.1 km/h

Maximum traction force ... 65.2 kN (6 650 kgf)

Gradeability .....

70% (35 degree) continuous

## SOUND LEVEL

Sound level in cab according to ISO 6396 .....	LpA 73 dB(A)
External sound level according to ISO 6395 and EU Directive 2000/14/EC .....	LwA 98 dB(A)

## SERVICE REFILL CAPACITIES

Fuel tank .....	120.0 L
Engine coolant .....	9.5 L
Engine oil .....	12.3 L
Travel device (each side) .....	1.2 L
Hydraulic system .....	100.0 L
Hydraulic oil tank .....	56.0 L

## WEIGHTS AND GROUND PRESSURE

### Operating Weight and Ground Pressure

#### Monoblock boom

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm <sup>2</sup> )
Grouser shoe	450 mm	1.62 m	8 430	37 (0.38)
		2.12 m	8 470	37 (0.38)
	600 mm	1.62 m	8 610	28 (0.29)
		2.12 m	8 650	28 (0.29)
Rubber shoe	450 mm	1.62 m	8 460	37 (0.38)
		2.12 m	8 500	37 (0.38)
Pad crawler shoe	450 mm	1.62 m	8 480	37 (0.38)
		2.12 m	8 520	37 (0.38)

Including 0.28 m<sup>3</sup> (ISO heaped) bucket weight (211 kg).

#### 2-Piece boom

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm <sup>2</sup> )
Grouser shoe	450 mm	1.62 m	8 850	39 (0.40)
		2.12 m	8 890	39 (0.40)
	600 mm	1.62 m	9 030	30 (0.30)
		2.12 m	9 060	30 (0.30)
Rubber shoe	450 mm	1.62 m	8 880	39 (0.40)
		2.12 m	8 910	39 (0.40)
Pad crawler shoe	450 mm	1.62 m	8 900	39 (0.40)
		2.12 m	8 940	39 (0.40)

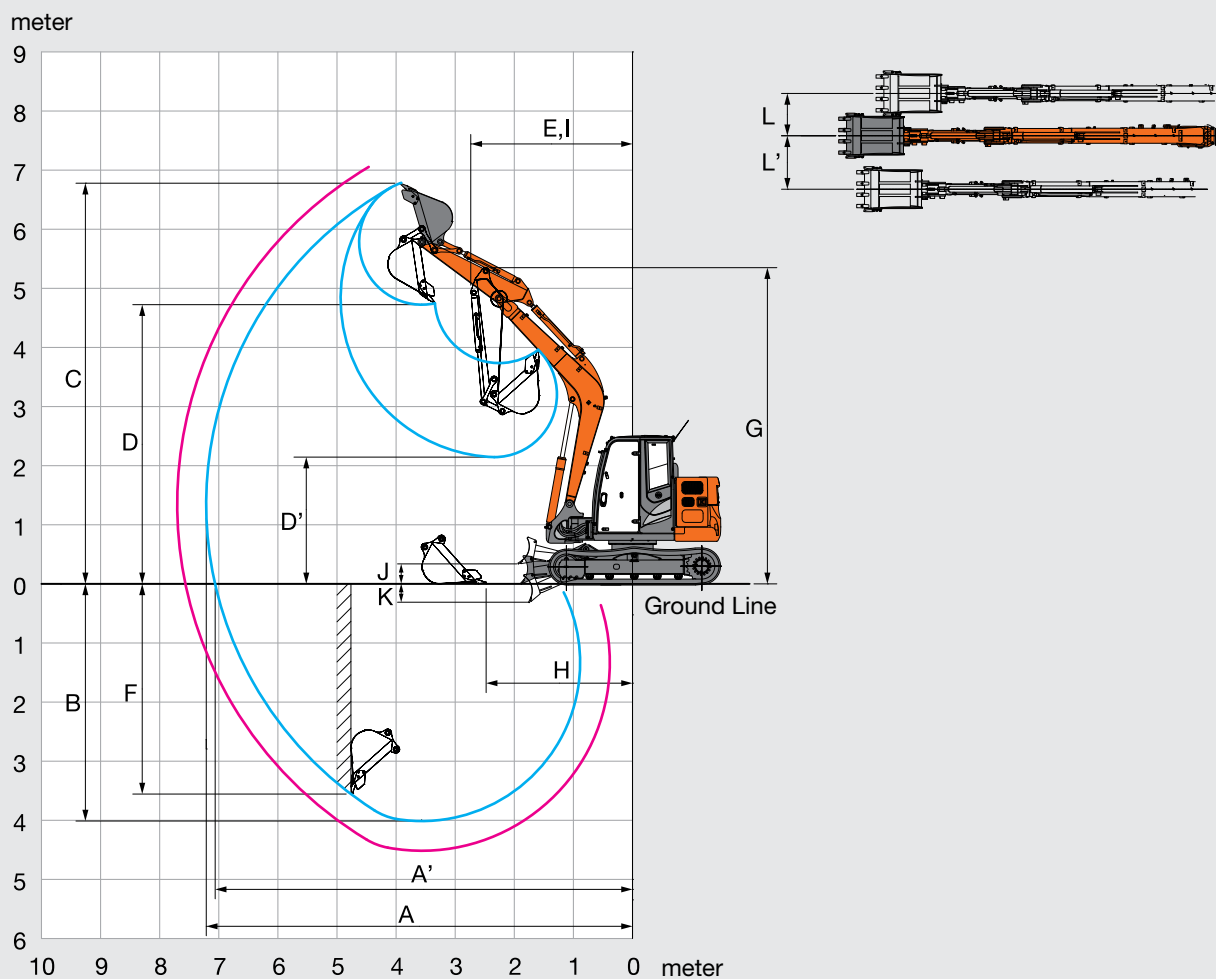
Including 0.28 m<sup>3</sup> (ISO heaped) bucket weight (211 kg).

## BUCKET AND ARM DIGGING FORCE

Arm length	Monoblock boom		2-Piece boom	
	1.62 m	2.12 m	1.62 m	2.12 m
Bucket digging force ISO	55.0 kN (5 600 kgf)		55.0 kN (5 600 kgf)	
Bucket digging force SAE : PCSA	47.0 kN (4 800 kgf)		47.0 kN (4 800 kgf)	
Arm crowd force ISO	38.0 kN (3 900 kgf)	32.0 kN (3 300 kgf)	38.0 kN (3 900 kgf)	32.0 kN (3 300 kgf)
Arm crowd force SAE : PCSA	36.0 kN (3 700 kgf)	31.0 kN (3 200 kgf)	36.0 kN (3 700 kgf)	31.0 kN (3 200 kgf)

# SPECIFICATIONS

## WORKING RANGES: MONOBLOCK BOOM

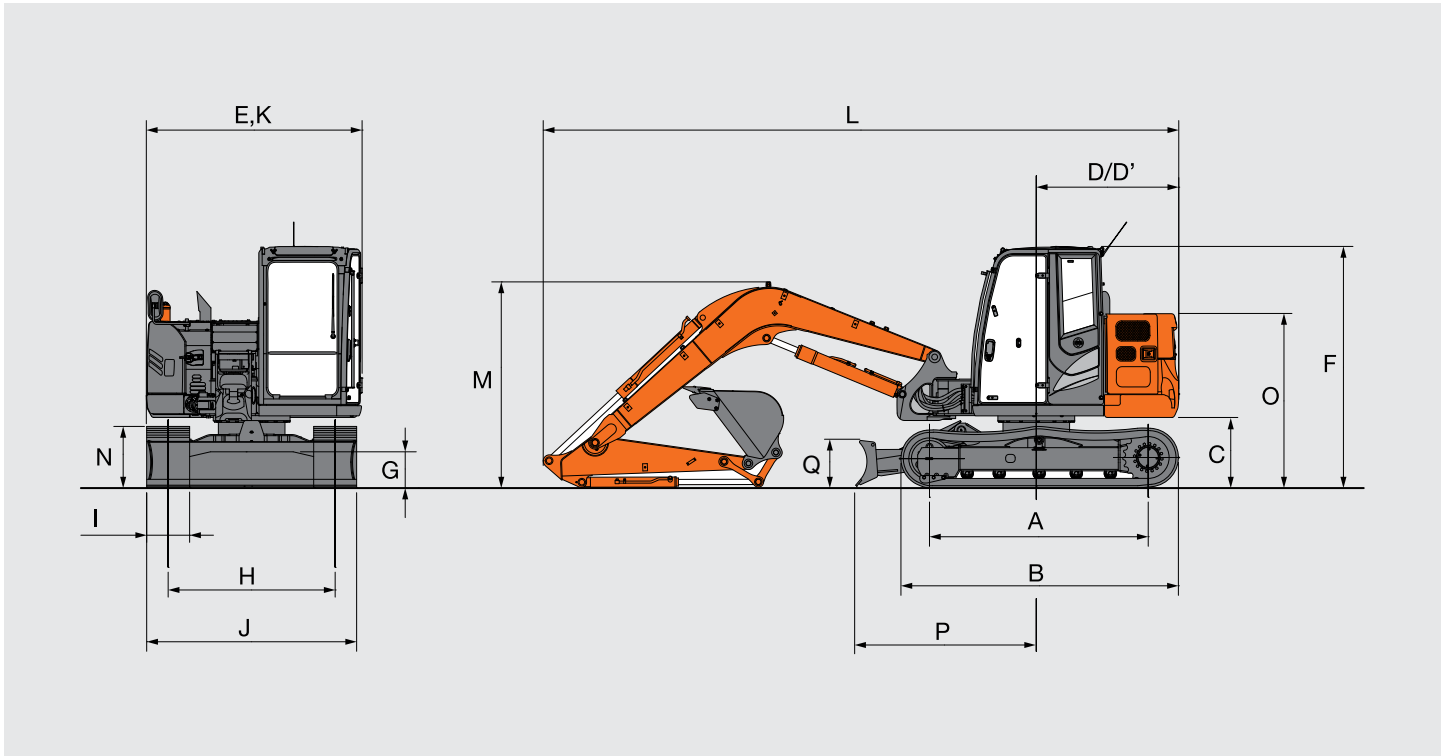


Unit: mm

Arm length	1.62 m	2.12 m
A Max. digging reach	7 210	7 700
A' Max. digging reach (on ground)	7 060	7 560
B Max. digging depth	3 990	4 510
C Max. cutting height	6 790	7 140
D Max. dumping height	4 770	5 080
D' Min. dumping height	2 130	1 670
E Min. swing radius	2 740	2 890
F Max. vertical wall	3 470	4 050
G Front height at Min. swing radius	5 370	5 400
H Min. level crowding distance	2 470	2 310
I Working radius at Min. swing radius (Max. boom-swing angle)	-	-
J Blade bottom highest position above ground	360	360
K Blade bottom lowest position above ground	300	300
L/L' Offset distance (Max. boom-swing angle)	1 150 / 1 150	1 150 / 1 150
Max. boom-swing angle (deg.)	60 / 60	60 / 60

Excluding track shoe lug.

## DIMENSIONS: MONOBLOCK BOOM



Unit: mm

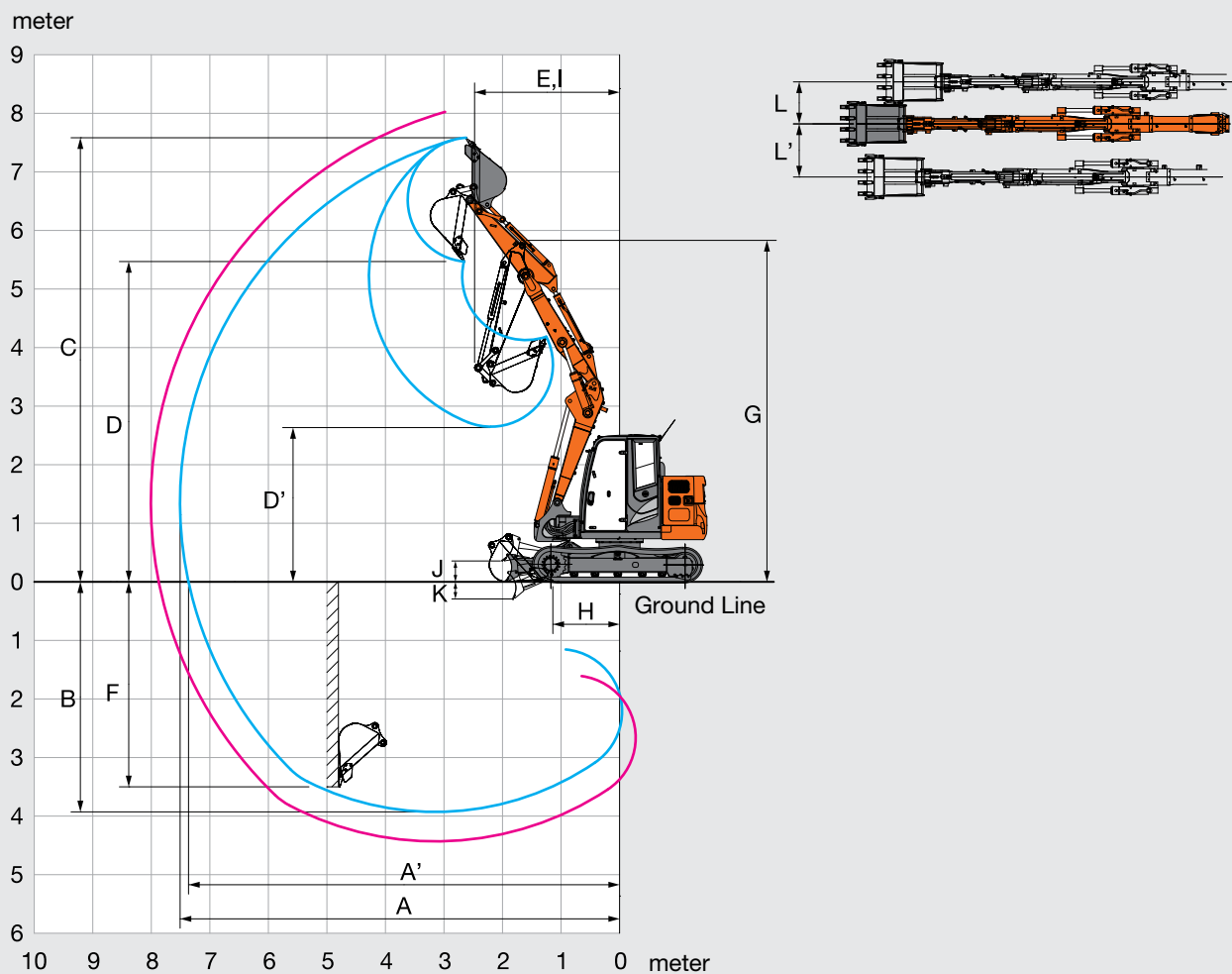
	ZAXIS 85USB
A Distance between tumblers	2 290
B Undercarriage length	2 920
*C Counterweight clearance	740
D Rear-end swing radius	1 490
D' Rear-end length	1 490
E Overall width of upperstructure	2 260
F Overall height of cab	2 550
*G Min. ground clearance	380
H Track gauge	1 750
I Track shoe width	450
J Undercarriage width	2 200
K Overall width	2 260
L Overall length	
With 1.62 m arm	6 640
With 2.12 m arm	6 820
*M Overall height of boom	
With 1.62 m arm	2 220
With 2.12 m arm	2 600
N Track height	650
O Engine cover-height	1 850
P Horizontal distance to blade	1 880
Q Blade height	480

\* Excluding track shoe lug.



# SPECIFICATIONS

## WORKING RANGES: 2-PIECE BOOM

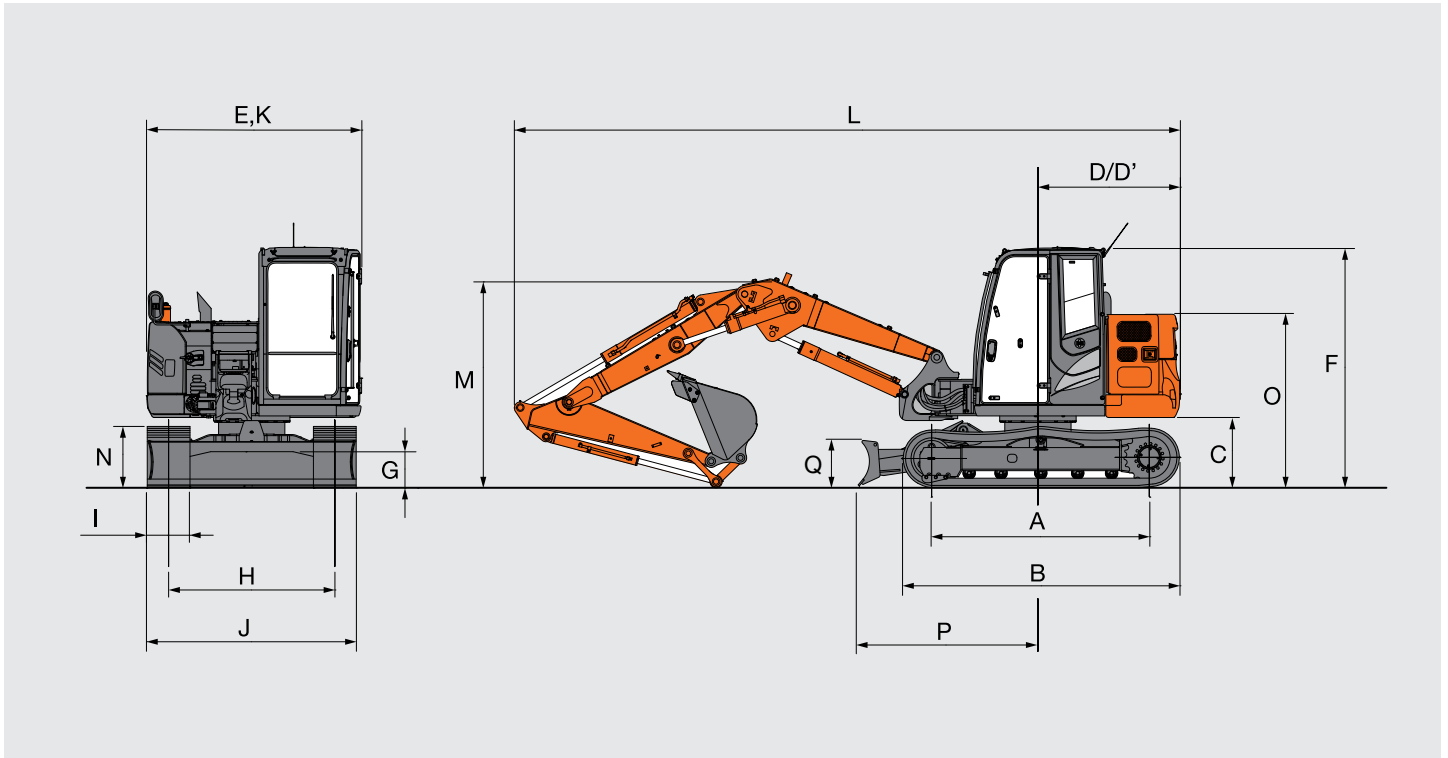


Unit: mm

Arm length	1.62 m	2.12 m
A Max. digging reach	7 510	8 000
A' Max. digging reach (on ground)	7 360	7 860
B Max. digging depth	3 910	4 410
C Max. cutting height	7 600	8 060
D Max. dumping height	5 490	5 940
D' Min. dumping height	2 670	2 320
E Min. swing radius	2 480	2 910
F Max. vertical wall	3 440	3 940
G Front height at Min. swing radius	5 810	5 830
H Min. level crowding distance	1 150	750
I Working radius at Min. swing radius (Max. boom-swing angle)	-	-
J Blade bottom highest position above ground	360	360
K Blade bottom lowest position above ground	300	300
L/L' Offset distance (Max. boom-swing angle)	1 150 / 1 150	1 150 / 1 150
Max. boom-swing angle (deg.)	60 / 60	60 / 60

Excluding track shoe lug.

## DIMENSIONS: 2-PIECE BOOM



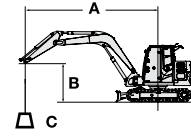
Unit: mm

	ZAXIS 85USB
A Distance between tumbler	2 290
B Undercarriage length	2 920
*C Counterweight clearance	740
D Rear-end swing radius	1 490
D' Rear-end length	1 490
E Overall width of upperstructure	2 260
F Overall height of cab	2 550
*G Min. ground clearance	380
H Track gauge	1 750
I Track shoe width	450
J Undercarriage width	2 200
K Overall width	2 260
L Overall length	
With 1.62 m arm	7 010
With 2.12 m arm	7 040
*M Overall height of boom	
With 1.62 m arm	2 320
With 2.12 m arm	2 750
N Track height	650
O Engine cover-height	1 850
P Horizontal distance to blade	1 880
Q Blade height	480

\* Excluding track shoe lug.

# MACHINE 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.



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

To determine lifting capacities, apply "Rating over-side or 360 degrees" machine capacities from table with "Blade above Ground" and deduct weight of installed attachment and quick hitch.

## ZAXIS 85USB Monoblock boom, Blade above Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
Boom 3.67 m	4.0					*2 180	1 990	1 680	1 410			1 480	1 240	5.41
Arm 1.62 m	3.0			*3 580	2 930	2 320	1 910	1 650	1 380			1 290	1 080	5.88
Counterweight 1 400 kg	2.0					2 210	1 810	1 600	1 330	1 230	1 020	1 200	1 000	6.11
Grouser shoe 450 mm	1.0					2 120	1 720	1 560	1 280	1 210	1 000	1 170	970	6.14
	0 (Ground)			*2 280	*2 280	2 080	1 680	1 520	1 250			1 200	1 000	5.97
	-1.0	*2 750	*2 750	3 230	2 540	2 070	1 670	1 510	1 240			1 320	1 090	5.57
	-2.0			3 270	2 570	2 090	1 690					1 590	1 300	4.89

## ZAXIS 85USB Monoblock boom, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
Boom 3.67 m	4.0					*2 180	1 990	*2 040	1 410			*1 920	1 240	5.41
Arm 1.62 m	3.0			*3 580	2 930	*2 590	1 910	*2 190	1 380			*1 920	1 070	5.88
Counterweight 1 400 kg	2.0					*3 150	1 810	*2 430	1 330	*2 070	1 020	*2 000	1 000	6.11
Grouser shoe 450 mm	1.0					*3 560	1 720	*2 630	1 250	*2 140	1 000	*2 080	970	6.14
	0 (Ground)			*2 280	*2 280	*3 650	1 680	*2 710	1 240			*2 120	1 000	5.97
	-1.0	*2 750	*2 750	*4 430	2 540	*3 440	1 670	*2 570				*2 150	1 090	5.58
	-2.0			*3 890	2 570	*2 900	1 690					*2 130	1 300	4.89

## ZAXIS 85USB Monoblock boom, Blade above Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
Boom 3.67 m	5.0							1 700	1 420			1 550	1 300	5.29
Arm 2.12 m	4.0							1 700	1 420			1 270	1 060	5.98
Counterweight 1 400 kg	3.0					*2 240	1 940	1 660	1 390	1 250	1 040	1 130	940	6.39
Grouser shoe 450 mm	2.0					2 240	1 830	1 610	1 330	1 230	1 020	1 060	880	6.61
	1.0					2 130	1 730	1 550	1 280	1 200	990	1 030	860	6.63
	0 (Ground)			*2 440	*2 440	2 060	1 670	1 510	1 240	1 170	970	1 060	870	6.48
	-1.0	*2 220	*2 220	3 170	2 490	2 040	1 640	1 490	1 220	1 160	960	1 140	940	6.12
	-2.0	*3 710	*3 710	3 200	2 510	2 040	1 650	1 490	1 220			1 310	1 080	5.52
	-3.0			3 260	2 570	2 080	1 690					1 740	1 430	4.55

## ZAXIS 85USB Monoblock boom, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
Boom 3.67 m	5.0							*1 780	1 420			*1 650	1 300	5.29
Arm 2.12 m	4.0							*1 780	1 420			*1 550	1 060	5.98
Counterweight 1 400 kg	3.0					*2 240	1 940	*1 960	1 390	*1 820	1 040	*1 540	940	6.39
Grouser shoe 450 mm	2.0					*2 830	1 840	*2 240	1 330	*1 930	1 020	*1 590	880	6.61
	1.0					*3 360	1 730	*2 500	1 280	*2 050	990	*1 700	860	6.63
	0 (Ground)			*2 440	*2 440	*3 610	1 670	*2 660	1 240	*2 110	970	*1 890	870	6.48
	-1.0	*2 220	*2 220	*3 760	2 490	*3 560	1 640	*2 640	1 220	*2 020	960	*1 940	940	6.12
	-2.0	*3 710	*3 710	*4 490	2 510	*3 200	1 650	*2 360	1 220			*1 960	1 080	5.52
	-3.0			*3 310	2 570	*2 370	1 690					*1 870	1 430	4.55

**ZAXIS 85USB 2-Piece boom, Blade above Ground**

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
2-Piece boom	5.0					*2 240	1 970	1 610	1 320			1 600	1 310	5.02
Arm 1.62 m	4.0			*3 000	*3 000	2 340	1 910	1 610	1 320			1 250	1 020	5.75
Counterweight 1 400 kg	3.0					2 200	1 780	1 550	1 270	1 150	930	1 090	880	6.19
Grouser shoe 450 mm	2.0					2 030	1 620	1 470	1 190	1 110	900	1 000	810	6.41
	1.0					1 900	1 500	1 400	1 120	1 080	870	970	780	6.44
	0 (Ground)					1 840	1 440	1 350	1 070	1 050	840	990	790	6.28
	-1.0			2 900	2 210	1 830	1 430	1 330	1 060			1 070	860	5.91
	-2.0			*2 890	2 250	1 860	1 460	1 360	1 080			1 270	1 020	5.28

**ZAXIS 85USB 2-Piece boom, Blade on Ground**

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
2-Piece boom	5.0					*2 240	1 970	*2 050	1 320			*1 960	1 310	5.03
Arm 1.62 m	4.0			*3 000	*3 000	*2 380	1 910	*2 070	1 320			*1 820	1 020	5.75
Counterweight 1 400 kg	3.0					*2 760	1 780	*2 210	1 270	*1 910	930	*1 790	880	6.19
Grouser shoe 450 mm	2.0					*3 200	1 620	*2 390	1 190	*1 960	900	*1 840	810	6.41
	1.0					*3 410	1 500	*2 510	1 120	*1 990	870	*1 810	780	6.44
	0 (Ground)					*3 320	1 440	*2 490	1 070	*1 930	840	*1 770	790	6.28
	-1.0			*3 340	2 210	*2 980	1 430	*2 280	1 060			*1 700	860	5.91
	-2.0			*2 890	2 250	*2 380	1 460	*1 760	1 080			*1 530	1 020	5.28

**ZAXIS 85USB 2-Piece boom, Blade above Ground**

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
2-Piece boom	5.0					*1 950	*1 950	1 680	1 390			1 330	1 090	5.68
Arm 2.12 m	4.0					*2 110	1 990	1 670	1 370	1 210	990	1 100	900	6.32
Counterweight 1 400 kg	3.0			*3 420	2 940	2 300	1 870	1 600	1 320	1 190	970	970	790	6.71
Grouser shoe 450 mm	2.0					2 120	1 710	1 520	1 240	1 150	930	910	730	6.91
	1.0					1 960	1 560	1 440	1 160	1 100	890	880	710	6.94
	0 (Ground)					1 870	1 470	1 370	1 100	1 060	850	890	720	6.79
	-1.0			2 880	2 190	1 840	1 440	1 340	1 070	1 050	840	950	760	6.45
	-2.0			2 910	2 220	1 850	1 450	1 340	1 070			1 090	870	5.89

**ZAXIS 85USB 2-Piece boom, Blade on Ground**

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

Conditions	Load point height m	Load radius										At max. reach		
		2.0 m		3.0 m		4.0 m		5.0 m		6.0 m				meter
2-Piece boom	5.0					*1 950	*1 950	*1 840	1 390			*1 580	1 090	5.68
Arm 2.12 m	4.0					*2 110	1 990	*1 890	1 370	*1 760	990	*1 490	900	6.32
Counterweight 1 400 kg	3.0			*3 420	2 940	*2 500	1 870	*2 060	1 320	*1 810	970	*1 470	790	6.71
Grouser shoe 450 mm	2.0					*2 990	1 710	*2 280	1 240	*1 900	930	*1 490	730	6.91
	1.0					*3 350	1 560	*2 460	1 160	*1 980	890	*1 570	710	6.94
	0 (Ground)					*3 420	1 470	*2 530	1 100	*1 980	850	*1 630	720	6.79
	-1.0			*2 880	2 190	*3 220	1 440	*2 420	1 070	*1 850	840	*1 580	760	6.45
	-2.0			*3 640	2 220	*2 760	1 450	*2 090	1 070			*1 480	870	5.89



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OPERATED PLANT HIRE

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**HITACHI**

**ZAXIS**