

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 m³

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 ⁻¹
ISO 9249, net	41.8 kW at 2 000 min ⁻¹
SAE J1349, net	41.8 kW at 2 000 min ⁻¹
Maximum torque	233.4 Nm at 1 300 min ⁻¹
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 ²)
Swing circuit	26.5 MPa (270 kgf/cm ²)
Travel circuit	31.4 MPa (320 kgf/cm ²)
Pilot circuit	3.9 MPa (40 kgf/cm ²)

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 ⁻¹ (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 ²)
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 m³ (ISO heaped) bucket weight (211 kg).

2-Piece boom

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm ²)
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)

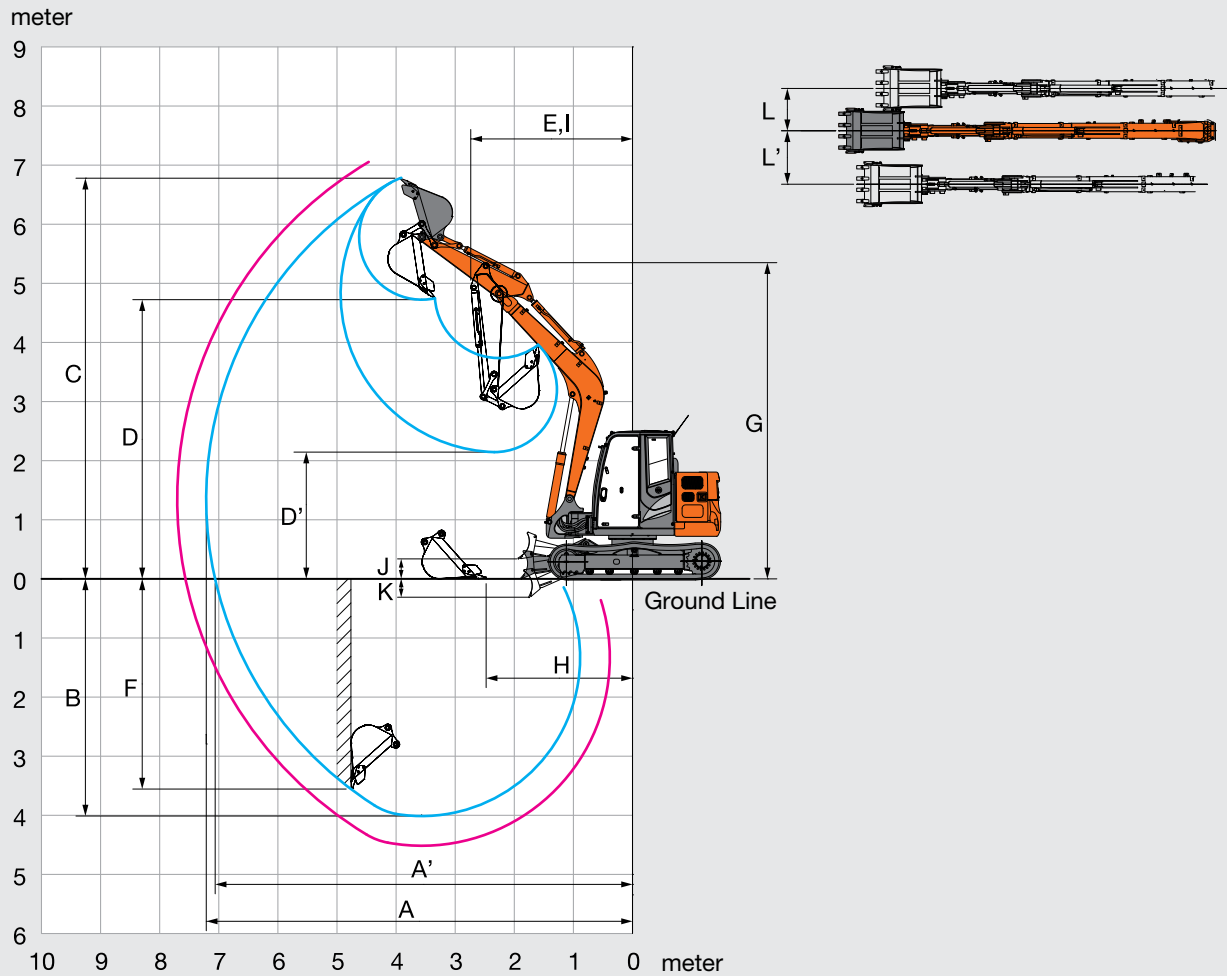
Including 0.28 m³ (ISO heaped) bucket weight (211 kg).

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

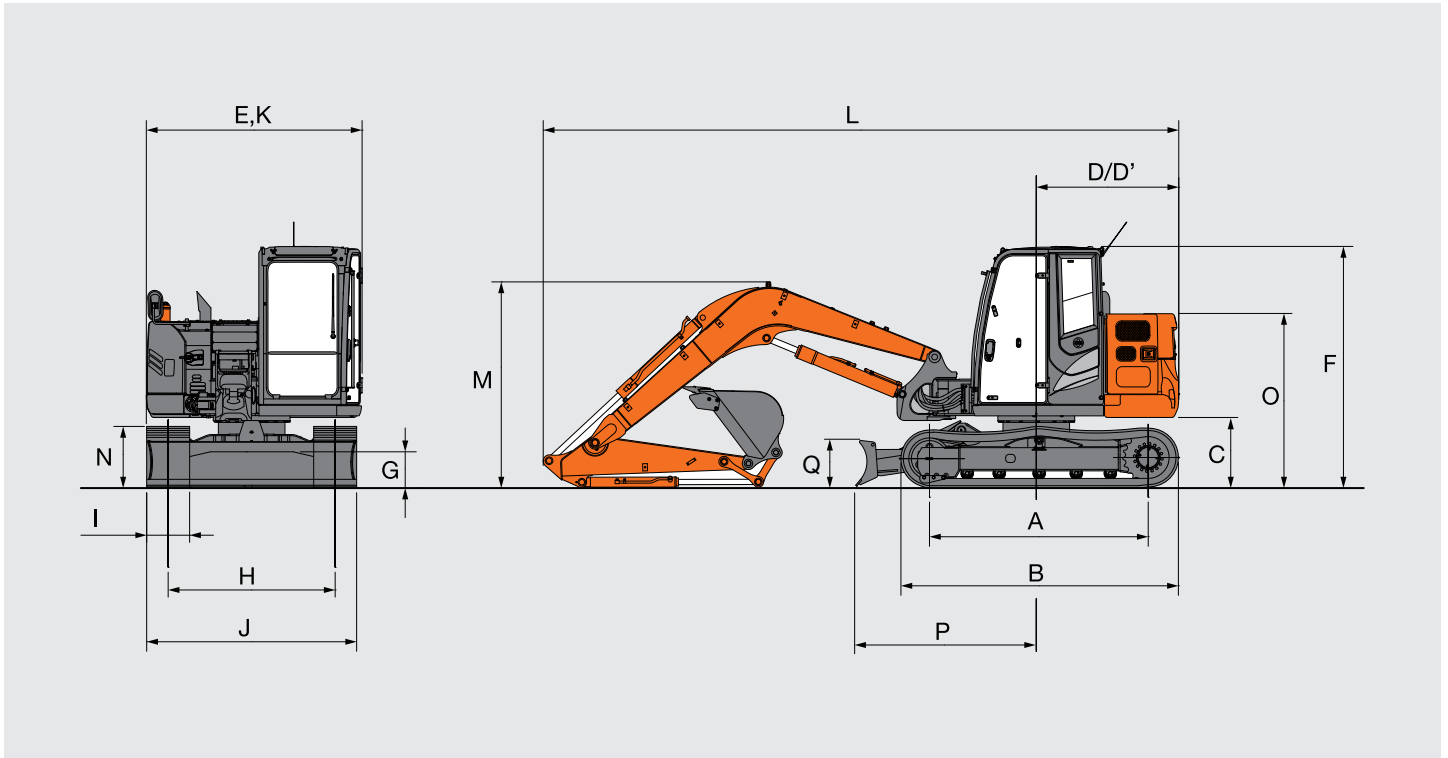


Unit: mm

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



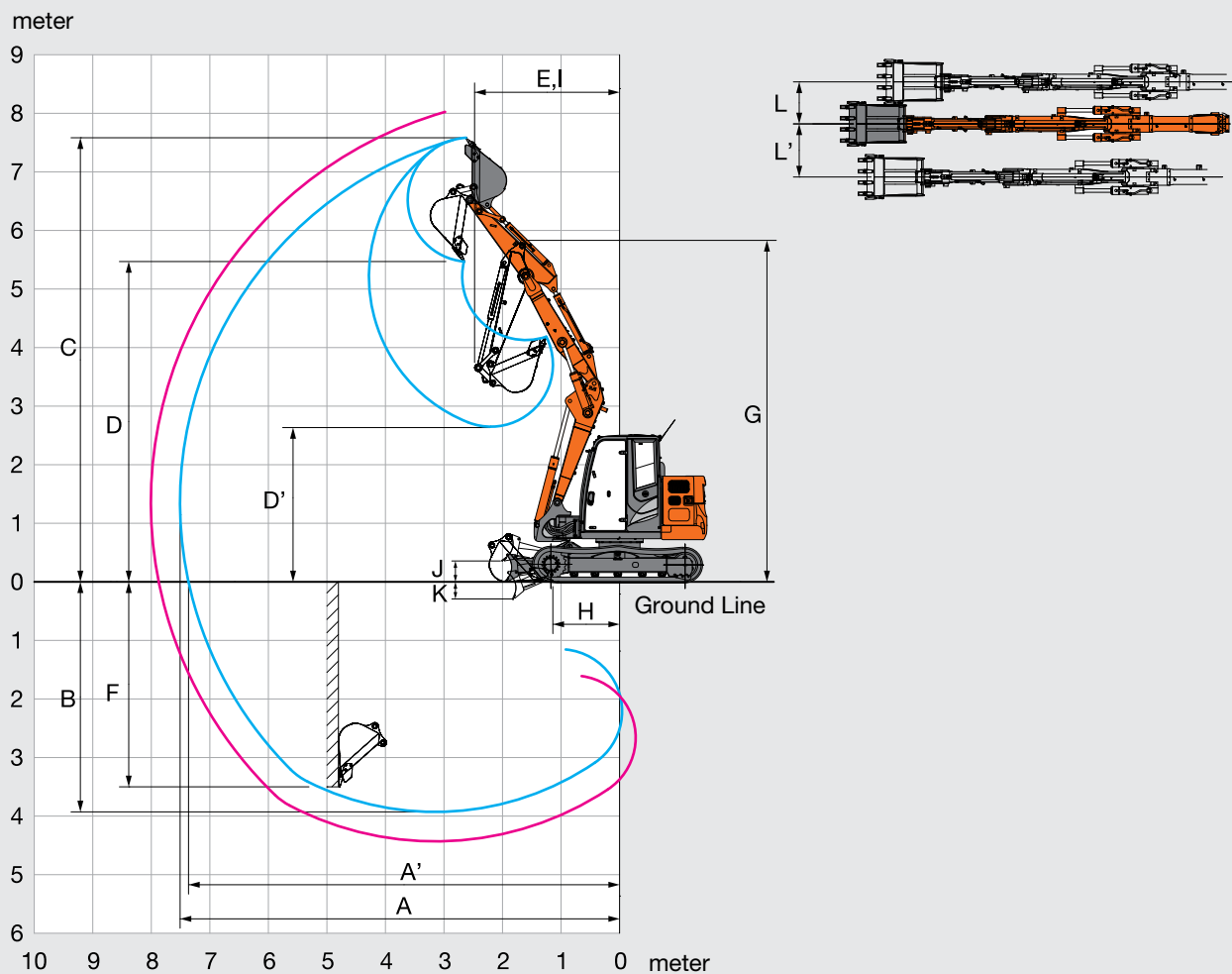
Unit: mm

	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

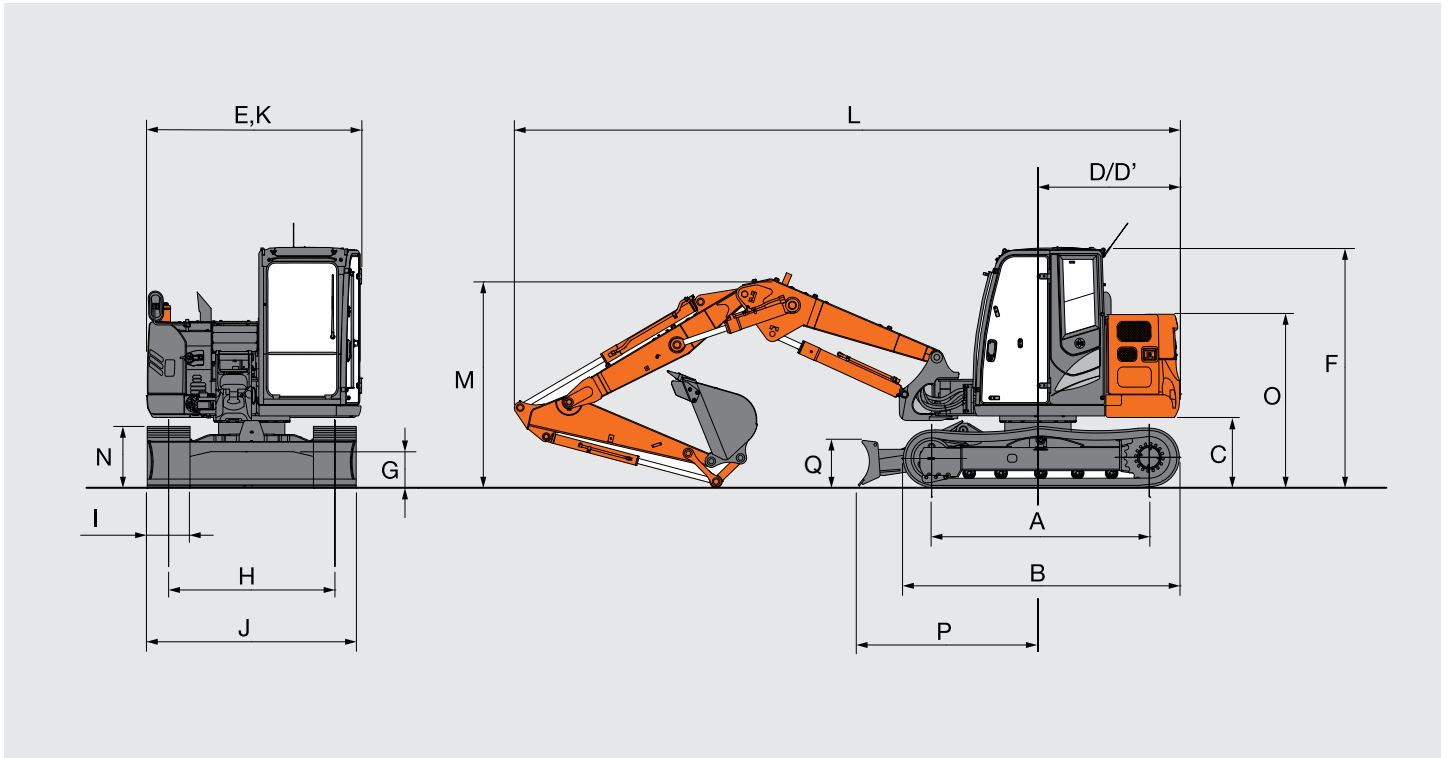


Unit: mm

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



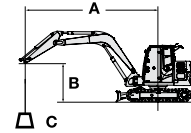
Unit: mm

	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

EQUIPMENT

● : Standard equipment

○ : Optional equipment

ENGINE

Air cleaner double filters	●
Alternator 24V - 60 A	●
Auto idle system	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Electric fuel refilling pump	●
Fan guard	●
Fuel cooler	●
Fuel pre-filter with water separator	●
PWR/ECO mode control	●
Radiator reserve tank	●
Radiator, oil cooler with dust-proof indoor net	●
Water-separator for engine fuel	●

HYDRAULIC SYSTEM

Boom anti-drift valve	●
Extra port for control valve	●
Full-flow filter	●
Hose rupture valve	●
Hydraulic pilot type control levers	●
Pilot control shut-off lever with neutral engine start system	●
Pilot filter	●
Suction filter	●
Swing drain filter	●
Swing parking brake	●
Travel parking brake	●
Two-speed travel system	●
Valve for extra piping	●

CAB

AM/FM radio	●
Anti-slip plate	●
Armrests	●
Ashtray	●
Auto control air conditioner*	●
Auxiliary function lever (AFL)	○
Cigarette lighter 24 V	●
Defroster	●
Drink holder	●
Electric horn	●
Floor mat	●
Glove compartment	●
Rain guard	○
Reclining seat	●
Reinforced, tinted glass window	●
Retractable seat belt	●
Rubber DAB radio antenna	●
ROPS/OPG cab	●
Seat : air suspension seat with heater	○
Seat : mechanical suspension seat with heater	●
Storage box	●
Sun visor	○
Transparency roof with roll curtain	●
USB Powre outlet (5V-20A)	●
Window washer	●
Wiper	●
4 fluid-filled elastic mounts	●

LIGHTS

Additional boom lights with cover	○
Additional cab roof front lights	○
Additional cab roof rear lights	○
Additional cab roof rear LED lights	○
Rotating lamp	○
2 working lights	●
4 working LED lights (Boom x 1, Body x 1, Cab roof front x2)	○

UPPER STRUCTURE

Auxiliary overload relief valve	●
Batteries 2 x 52Ah	●
Battery disconnect switch	●
Electrical fuel feed pump with auto stop	●
Fuel level float	●
Pilot accumulator	○
Rear view camera	●
Rear view mirror (right, left side)	●
Tool box	●
Undercover	●
1 400 kg counter weight	●
370 kg additional counter weight	○

UNDERCARRIAGE

Blade	●
Reinforced track links with pin seals	●
Travel motor covers	●
4 tie down hooks	●
450 mm grouser shoe	●
450 mm pad crawler shoe	○
450 mm rubber shoe	○
600 mm grouser shoe	○

FRONT ATTACHMENTS

Assist piping	○
Dirt seal on all bucket pins	●
Extra piping	●
Flanged pin	●
HN bushing	●
Reinforced resin thrust plate	●
WC (tungsten-carbide) thermal spraying	●
1.62 m arm	○
2.12 m arm	●

MISCELLANEOUS

Global e-service***	●
Theft deterrent system**	●

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

* Contains fluorinated greenhouse gases, Refrigerant type: HFC-134a, GWP: 1430, Amount: 0.80 kg, CO₂e: 1.14 ton.

** Hitachi Construction Machinery cannot be held liable for theft, any system will just minimize the risk of theft.

***It is possible to obtain information by connecting to Global e-service with a Hitachi genuine mobile terminal.

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.