ZAXIS-6 series

HITACHI

Reliable solutions

ZAXIS85US

HYDRAULIC EXCAVATOR

Model code : ZX85US-6
Engine rated power : 42.4 kW (ISO14396)
Operating weight : MONOBLOCK BOOM : 8 140 – 8 470 kg
OFF-SET FRONT : 8 630 – 8 930 kg
Bucket ISO heaped : 0.28 m^3

ZX85US-6

The compact excavator

6. Powerful performance

8. Exceptional comfort

10. Easy to maintain

No compromise


HITACHI

Perfect fit

One of the most powerful Hitachi compact excavators, the ZX85US-6 is equipped with a 42.4 kW Stage V-compliant engine and muffler filter after-treatment device to reduce emissions. Its easy maintenance features ensure an optimum performance on a variety of job sites, including indoor demolition and construction, as well as utilities, foundation work and landscaping. It has also been designed to provide the highest levels of comfort and safety for operators.

Improved performance
The greater engine output and hydraulic pump torque enhances efficiency.

Short-tail swing radius
The short-tail swing radius of the ZX85US-6 is ideal for confined spaces.

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

The compact ZX85US-6 maintains high levels of productivity on a variety of job sites, especially where space is limited. Thanks to its innovative design and features, it operates with a smaller environmental impact with reduced fuel consumption and emissions.

Efficient productivity

The ZX85US-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 ZX85US-6, such as the strengthened front attachment and 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 ZX85US-6 ideal for working in tight spaces.

Quick cycle time and efficient hydraulics ensure high productivity.

Large color multifunctional LCD monitor shows data at a glance.

Easy access via the large door space.

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

Exceptional comfort

Hitachi has designed the cab of the ZX85US-6 to be a safe and spacious working environment. Ergonomically designed controls, excellent all-round visibility and more leg room contribute to a high level of comfort for operators, and ensure long shifts are easier and more enjoyable.

The controls and monitor are within easy reach.

Spacious cab

The ROPS-compliant pressurised cab of the ZX85US-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 ZX85US-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 ZX85US-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.

Easy to maintain

Daily checks, cleaning and servicing are easier than ever with the new ZX85US-6, saving you valuable time during the working day, and ensuring an optimum performance. This is thanks to accessible parts and the conveniently arranged layout of components in 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.

The radiator has a dust-proof net that is easy to clean.

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^{-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 × 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	105 mm	60 mm	386 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	14.3 kNm

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.
* International Organization for Standarization

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 72 dB(A)
External sound level according to ISO 6395 and EU Directive 2000/14/EC	LwA 98 dB(A)

SERVICE REFILL CAPACITIES

Fuel tank	135.0 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/cm²)
Grouser shoe	450 mm	1.62 m	8 140	35 (0.36)
		2.12 m	8 170	35 (0.36)
	600 mm	1.62 m	8 340	27 (0.28)
		2.12 m	8 370	27 (0.28)
Rubber shoe	450 mm	1.62 m	8 440	36 (0.37)
		2.12 m	8 470	36 (0.37)
Pad crawler shoe	450 mm	1.62 m	8 140	35 (0.36)
		2.12 m	8 170	35 (0.36)

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

OFF-SET FRONT

Shoe type	Shoe width	Arm length	kg	kPa (kgf/cm²)
Grouser shoe	450 mm	1.62 m	8 630	37 (0.38)
	600 mm	1.62 m	8 830	29 (0.29)
Rubber shoe	450 mm	1.62 m	8 930	38 (0.39)
Pad crawler shoe	450 mm	1.62 m	8 630	37 (0.38)

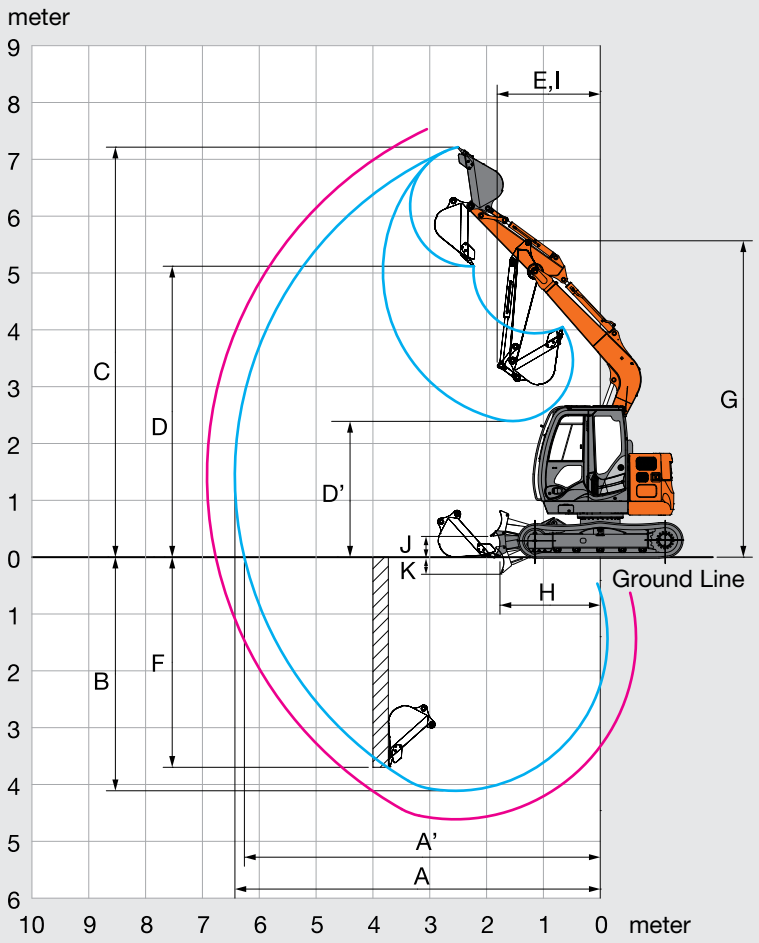
Including 0.28 m³ (ISO heaped) bucket weight (211 kg).

BUCKET AND ARM DIGGING FORCE

	Monoblock boom		Off-set front
Arm length	1.62 m	2.12 m	1.62 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)	40.0 kN (4 100 kgf)
Arm crowd force SAE : PCSA	36.0 kN (3 700 kgf)	31.0 kN (3 200 kgf)	38.0 kN (3 900 kgf)

SPECIFICATIONS

WORKING RANGES

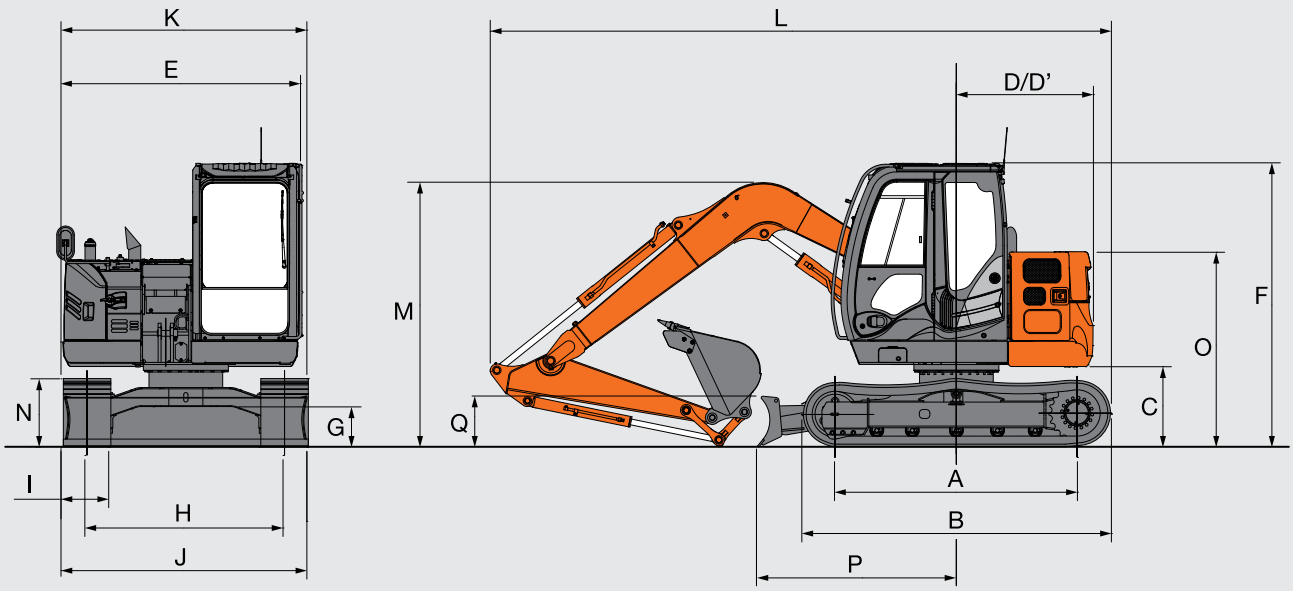


Unit: mm

Arm length	1.62 m	2.12 m
A Max. digging reach	6 430	6 920
A' Max. digging reach (on ground)	6 260	6 760
B Max. digging depth	4 110	4 610
C Max. cutting height	7 210	7 610
D Max. dumping height	5 120	5 510
D' Min. dumping height	2 390	2 410
E Min. swing radius	1 810	2 170
F Max. vertical wall	3 670	4 220
G Front height at Min. swing radius	5 590	5 610
H Min. level crowding distance	1 770	1 670
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

Excluding track shoe lug.

DIMENSIONS



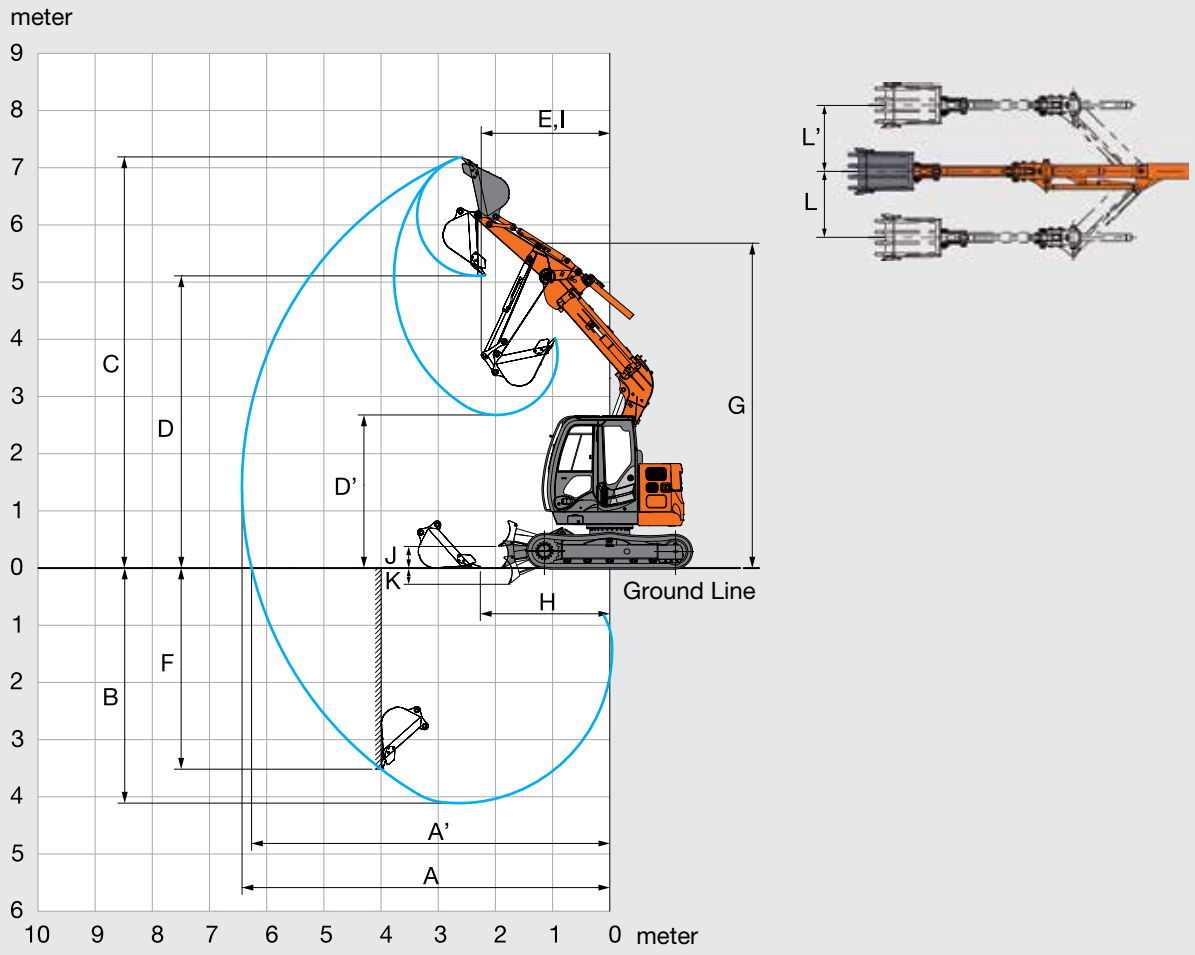
Unit: mm

	ZAXIS 85US
A Distance between tumblers	2 290
B Undercarriage length	2 920
*C Counterweight clearance	730
D Rear-end swing radius	1 290
D' Rear-end length	1 290
E Overall width of upperstructure	2 260
F Overall height of cab	2 690
*G Min. ground clearance	360
H Track gauge	1 870
I Track shoe width	450
J Undercarriage width	2 320
K Overall width	2 320
L Overall length	
With 1.62 m arm	5 870
With 2.12 m arm	6 370
*M Overall height of boom	
With 1.62 m arm	2 690
With 2.12 m arm	2 830
N Track height	650
O Engine cover-height	1 850
P Horizontal distance to blade	1 890
Q Blade height	480

* Excluding track shoe lug.

SPECIFICATIONS

WORKING RANGES: OFF-SET FRONT

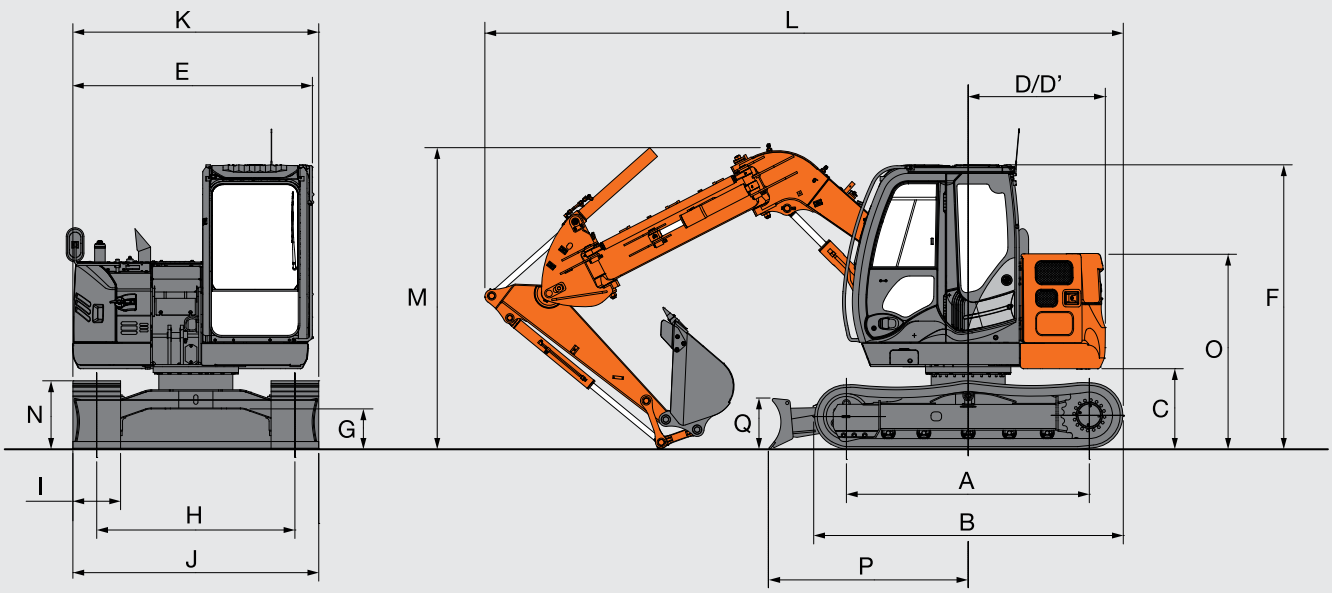


Unit: mm

Arm length		1.62 m
A	Max. digging reach	6 430
A'	Max. digging reach (on ground)	6 260
B	Max. digging depth	4 110
C	Max. cutting height	7 190
D	Max. dumping height	5 110
D'	Min. dumping height	2 670
E	Min. swing radius	2 260
F	Max. vertical wall	3 490
G	Front height at Min. swing radius	5 680
H	Min. level crowding distance	2 280
I	Working radius at Min. swing radius (Max. boom-swing angle)	–
J	Blade bottom highest position above ground	360
K	Blade bottom lowest position above ground	300
L/L'	Left side offset distance / Right side offset distance	1 150 / 1 150

Excluding track shoe lug.

DIMENSIONS: OFF-SET FRONT



Unit: mm

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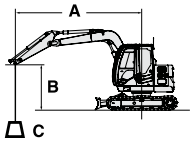
A Distance between tumblers	2 290
B Undercarriage length	2 920
*C Counterweight clearance	730
D Rear-end swing radius	1 290
D' Rear-end length	1 290
E Overall width of upperstructure	2 260
F Overall height of cab	2 690
*G Min. ground clearance	360
H Track gauge	1 870
I Track shoe width	450
J Undercarriage width	2 320
K Overall width	2 320
L Overall length	
With 1.62 m arm	6 440
*M Overall height of boom	
With 1.62 m arm	2 870
N Track height	650
O Engine cover-height	1 850
P Horizontal distance to blade	1 890
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.

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.



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

ZAXIS 85US Monoblock boom, Blade above Ground

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

Conditions	Load point height m	Load radius 1.0 m		2.0 m		3.0 m		4.0 m		5.0 m		At max. reach		
														meter
Boom 3.72 m Arm 1.62 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0					*1 580	*1 580					*1 630	*1 630	3.95
	4.0					*1 760	*1 760	*1 720	*1 720			*1 520	1 410	4.69
	3.0					*2 280	*2 280	*1 930	1 780	1 560	1 260	1 500	1 210	5.13
	2.0					*2 970	2 610	2 140	1 710	1 530	1 230	1 390	1 120	5.34
	1.0					3 220	2 480	2 070	1 640	1 500	1 200	1 360	1 090	5.35
	0 (Ground)					3 150	2 420	2 030	1 600	1 480	1 180	1 410	1 130	5.17
	-1.0	*2 900	*2 900	*4 230	*4 230	3 140	2 410	2 010	1 590			1 580	1 260	4.76
	-2.0			*4 560	*4 560	3 170	2 440	2 040	1 610			2 000	1 580	4.07

ZAXIS 85US Monoblock boom, Blade on Ground

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

Conditions	Load point height m	Load radius 1.0 m		2.0 m		3.0 m		4.0 m		5.0 m		At max. reach		
														meter
Boom 3.72 m Arm 1.62 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0					*1 580	*1 580					*1 630	*1 630	3.95
	4.0					*1 760	*1 760	*1 720	*1 720			*1 520	1 410	4.69
	3.0					*2 280	*2 280	*1 930	1 780	*1 810	1 260	*1 500	1 210	5.13
	2.0					*2 970	2 610	*2 230	1 710	*1 920	1 230	*1 550	1 120	5.34
	1.0					*3 490	2 480	*2 510	1 640	*2 050	1 200	*1 660	1 090	5.35
	0 (Ground)					*3 680	2 420	*2 680	1 600	*2 120	1 180	*1 890	1 130	5.17
	-1.0	*2 900	*2 900	*4 230	*4 230	*3 600	2 410	*2 660	1 590			*2 150	1 260	4.76
	-2.0			*4 560	*4 560	*3 240	2 440	*2 320	1 610			*2 260	1 580	4.07

ZAXIS 85US Monoblock boom, Blade above Ground

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

Conditions	Load point height m	Load radius 1.0 m		2.0 m		3.0 m		4.0 m		5.0 m		At max. reach		
														meter
Boom 3.72 m Arm 2.12 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0							*1 400	*1 400			*1 360	*1 360	4.60
	4.0							*1 450	*1 450	*1 520	1 290	*1 270	1 190	5.25
	3.0			*2 320	*2 320	*1 880	*1 880	*1 680	*1 680	1 570	1 270	*1 260	1 040	5.64
	2.0					*2 580	*2 580	*2 010	1 730	1 530	1 230	1 210	970	5.83
	1.0					*3 220	2 510	2 080	1 650	1 490	1 190	1 190	950	5.84
	0 (Ground)					3 150	2 420	2 020	1 590	1 460	1 160	1 220	980	5.67
	-1.0	*2 290	*2 290	*3 560	*3 560	3 110	2 380	1 990	1 560	1 450	1 150	1 340	1 060	5.31
	-2.0	*3 710	*3 710	*5 040	4 890	3 120	2 390	1 990	1 570			1 590	1 260	4.70
	-3.0			*4 100	*4 100	*2 840	2 450					*2 120	1 790	3.73

ZAXIS 85US Monoblock boom, Blade on Ground

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

Conditions	Load point height m	Load radius 1.0 m		2.0 m		3.0 m		4.0 m		5.0 m		At max. reach		
														meter
Boom 3.72 m Arm 2.12 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0							*1 400	*1 400			*1 360	*1 360	4.60
	4.0							*1 450	*1 450	*1 520	1 290	*1 270	1 190	5.25
	3.0			*2 320	*2 320	*1 880	*1 880	*1 680	*1 680	*1 600	1 270	*1 260	1 040	5.64
	2.0					*2 580	*2 580	*2 010	1 730	*1 760	1 230	*1 290	970	5.83
	1.0					*3 220	2 510	*2 350	1 650	*1 930	1 190	*1 370	950	5.84
	0 (Ground)					*3 570	2 420	*2 580	1 590	*2 060	1 160	*1 510	980	5.67
	-1.0	*2 290	*2 290	*3 560	*3 560	*3 640	2 380	*2 660	1 560	*2 080	1 150	*1 770	1 060	5.31
	-2.0	*3 710	*3 710	*5 040	4 890	*3 440	2 390	*2 530	1 570			*2 020	1 260	4.70
	-3.0			*4 100	*4 100	*2 840	2 450					*2 120	1 790	3.73

ZAXIS 85US Off-set front, Blade above Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				
														meter
Off-set Boom Arm 1.62 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0													
	4.0					*1 750	*1 750	*1 620	*1 620			*1 610	1 510	4.40
	3.0			*3 280	*3 280	*2 180	*2 180	*1 800	1 700			1 540	1 210	4.86
	2.0					*2 750	2 410	2 010	1 570	1 410	1 100	1 370	1 070	5.08
	1.0					2 910	2 170	1 880	1 450	1 350	1 040	1 310	1 010	5.10
	0 (Ground)					2 790	2 070	1 800	1 370			1 350	1 030	4.90
	-1.0			*4 470	4 240	2 780	2 050	1 780	1 340			1 520	1 160	4.47
	-2.0			*3 880	*3 880	*2 810	2 100							

ZAXIS 85US Off-set front, Blade on Ground

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

Conditions	Load point height m	Load radius										At max. reach		
		1.0 m		2.0 m		3.0 m		4.0 m		5.0 m				
														meter
Off-set Boom Arm 1.62 m Counterweight 1 300 kg Grouser shoe 450 mm	5.0													
	4.0					*1 750	*1 750	*1 620	*1 620			*1 610	1 510	4.40
	3.0			*3 280	*3 280	*2 180	*2 180	*1 800	1 700			*1 650	1 210	4.86
	2.0					*2 750	2 410	*2 050	1 570	*1 740	1 100	*1 720	1 070	5.08
	1.0					*3 160	2 170	*2 270	1 450	*1 840	1 040	*1 810	1 010	5.10
	0 (Ground)					*3 270	2 070	*2 390	1 370			*1 930	1 030	4.90
	-1.0			*4 470	4 240	*3 170	2 050	*2 350	1 340			*2 070	1 160	4.47
	-2.0			*3 880	*3 880	*2 810	2 100							

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	●
OPG top guard, Level II	○
Rain guard	○
Reclining seat	●
Retractable seat belt	●
Rubber DAB radio antenna	●
ROPS/OPG cab	●
Seat : air suspension seat with heater	○
Seat : mechanical suspension seat with heater	●
Spare power supply 12V	○
Storage box	●
Sun visor	○
Transparent roof	●
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	●
1 300 kg counterweight	●
1 820 kg counterweight	○

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, CO_2e: 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.

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