

# SPECIFICATIONS

## ENGINE

Model .....	Yanmar 4TNV94L (EU Stage IIIA)
Type .....	4-cycle water-cooled, direct injection
No. of cylinders .....	4
Rated power	
ISO 9249, net .....	34.1 kW (45.7 HP) at 2 000 min <sup>-1</sup> (rpm)
EEC 80/1269, net .....	34.1 kW (45.7 HP) at 2 000 min <sup>-1</sup> (rpm)
SAE J1349, net .....	34.1 kW (45.7 HP) at 2 000 min <sup>-1</sup> (rpm)
Maximum torque .....	204.1 Nm (20.8 kgfm) at 1 000 min <sup>-1</sup> (rpm)
Piston displacement .....	3.053 L
Bore and stroke .....	94 mm x 110 mm
Batteries .....	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

## 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 (1 690 kgfm)

### Operator's Cab

Independent spacious cab, 1 065 mm wide by 1 655 mm high, conforming to the "ROPS for excavator" (ISO\* 12117-2). 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 and shoes 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
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Maximum traction force 65.2 kN (6 650 kgf)

Gradeability .....

70% (35 degree) continuous

## SERVICE REFILL CAPACITIES

Fuel tank .....	120.0 L
Engine coolant .....	7.0 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

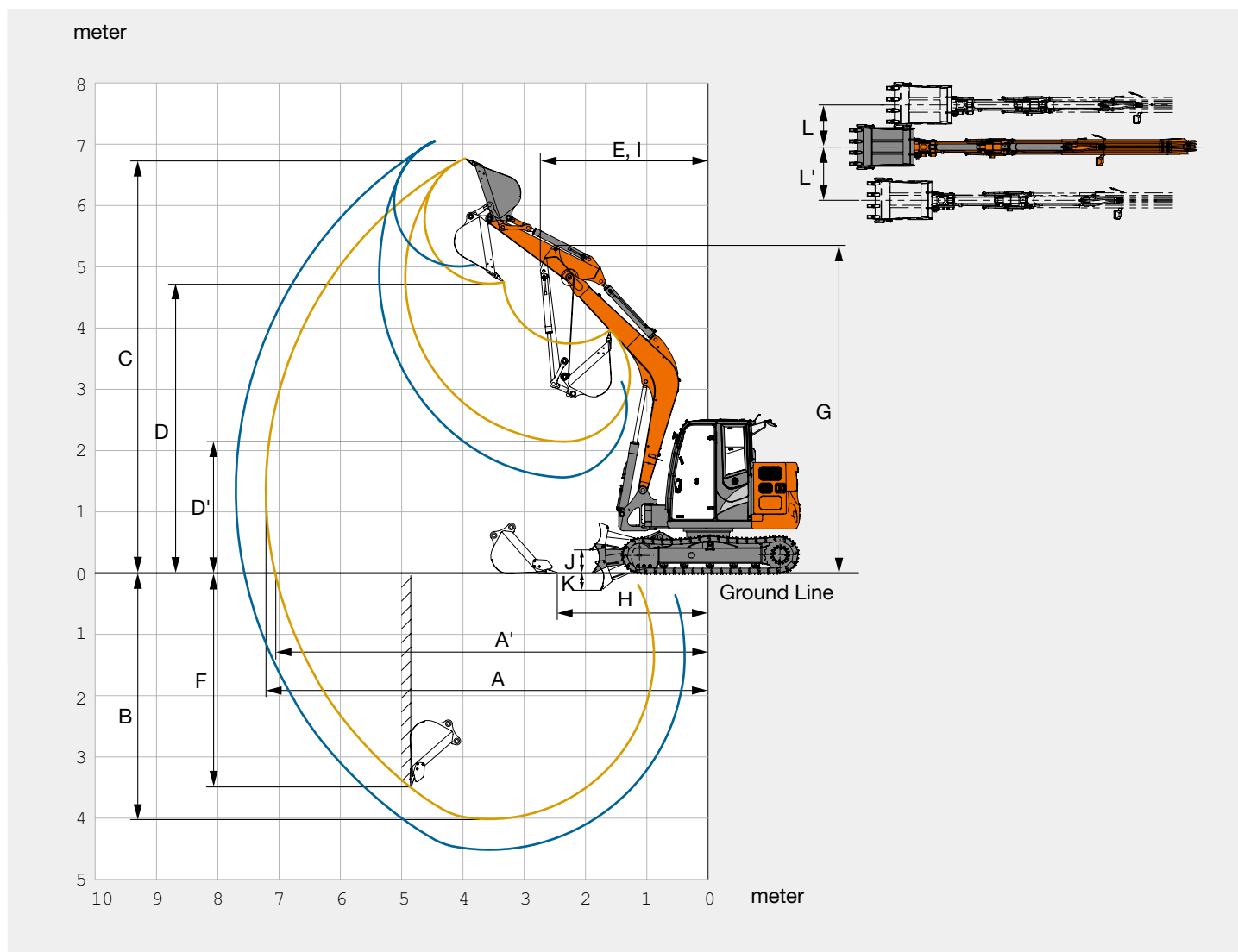
Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm <sup>2</sup> )
Grouser shoe	450 mm	1.62 m	8 390	36 (0.37)
		2.12 m	8 430	37 (0.37)
	600 mm	1.62 m	8 560	28 (0.28)
		2.12 m	8 600	28 (0.29)
Rubber shoe	450 mm	1.62 m	8 410	36 (0.37)
		2.12 m	8 450	37 (0.37)
Pad crawler shoe	450 mm	1.62 m	8 440	36 (0.37)
		2.12 m	8 480	36 (0.37)

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

## BUCKET AND ARM DIGGING FORCE

Arm length	1.62 m	2.12 m
Bucket digging force ISO	55.0 kN (5 600 kgf)	
Bucket digging force SAE : PCSA	47.0 kN (4 800 kgf)	
Arm crowd force ISO	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)

## WORKING RANGES



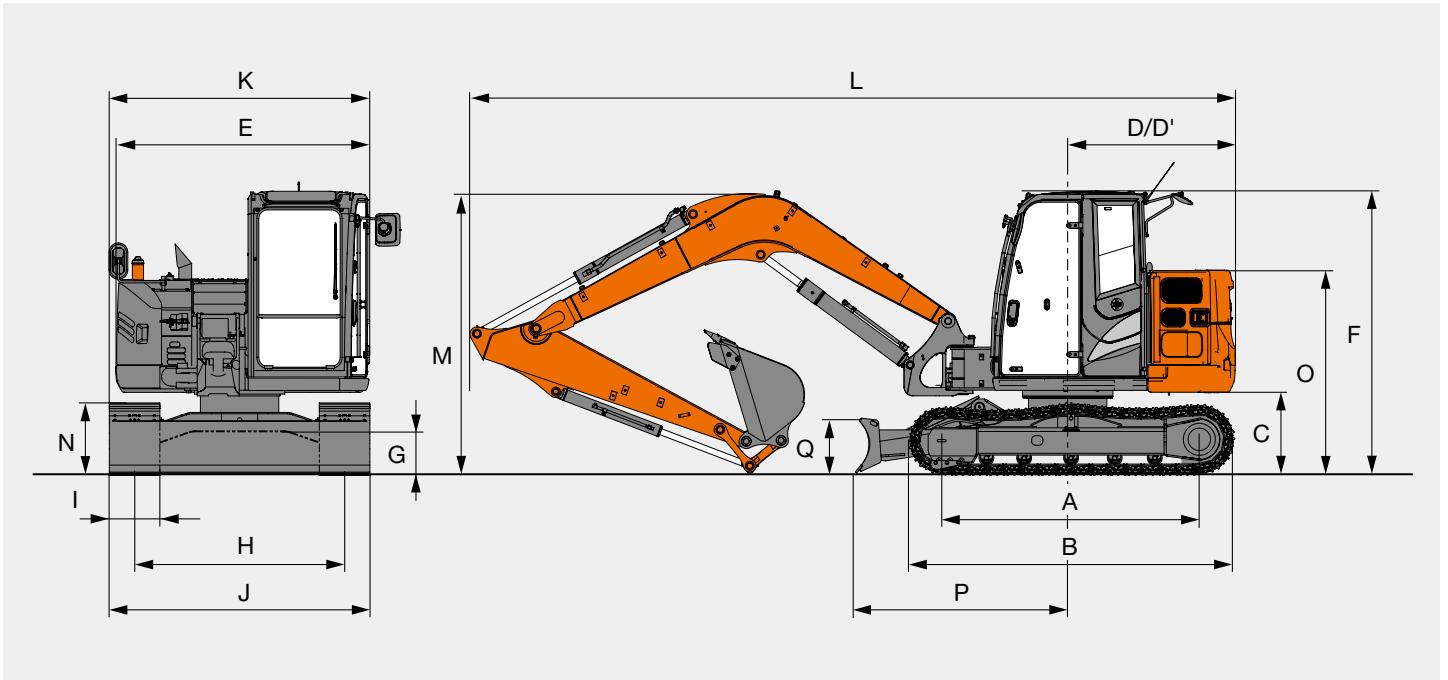
Unit: mm

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.

# SPECIFICATIONS

## DIMENSIONS



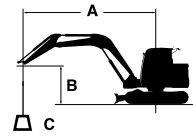
Unit: mm

	ZX85USB-5A
A Distance between tumblers	2 290
B Undercarriage length	2 920
* C Counterweight clearance	720
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	2 530
* G Min. ground clearance	360
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	1 810
P Horizontal distance to blade	1 880
Q Blade height	460

\* 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.



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

For lifting capacities, subtract bucket and quick hitch weight from lifting capacities without bucket.

## ZX85USB-5A 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					*2 180	1 990	1 680	1 410			1 480	1 240	5.41
Arm 1.62 m	3			*3 580	2 930	2 320	1 910	1 650	1 380			1 290	1 080	5.88
Counterweight 1 400 kg	2					2 210	1 810	1 600	1 330	1 230	1 020	1 200	1 000	6.11
Grouser shoe 450 mm	1					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	*2 750	*2 750	3 230	2 540	2 070	1 670	1 510	1 240			1 320	1 090	5.57
	-2			3 270	2 570	2 090	1 690					1 590	1 300	4.89

## ZX85USB-5A 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					*2 180	1 990	*2 040	1 410			*1 920	1 240	5.41
Arm 1.62 m	3			*3 580	2 930	*2 590	1 910	*2 190	1 380			*1 920	1 070	5.88
Counterweight 1 400 kg	2					*3 150	1 810	*2 430	1 330	*2 070	1 020	*2 000	1 000	6.11
Grouser shoe 450 mm	1					*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	*2 750	*2 750	*4 430	2 540	*3 440	1 670	*2 570				*2 150	1 090	5.58
	-2			*3 890	2 570	*2 900	1 690					*2 130	1 300	4.89

## ZX85USB-5A 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							1 700	1 420			1 550	1 300	5.29
Arm 2.12 m	4							1 700	1 420			1 270	1 060	5.98
Counterweight 1 400 kg	3					*2 240	1 940	1 660	1 390	1 250	1 040	1 130	940	6.39
Grouser shoe 450 mm	2					2 240	1 830	1 610	1 330	1 230	1 020	1 060	880	6.61
	1					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	*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	*3 710	*3 710	3 200	2 510	2 040	1 650	1 490	1 220			1 310	1 080	5.52
	-3			3 260	2 570	2 080	1 690					1 740	1 430	4.55

## ZX85USB-5A 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							*1 780	1 420			*1 650	1 300	5.29
Arm 2.12 m	4							*1 780	1 420			*1 550	1 060	5.98
Counterweight 1 400 kg	3					*2 240	1 940	*1 960	1 390	*1 820	1 040	*1 540	940	6.39
Grouser shoe 450 mm	2					*2 830	1 840	*2 240	1 330	*1 930	1 020	*1 590	880	6.61
	1					*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	*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	*3 710	*3 710	*4 490	2 510	*3 200	1 650	*2 360	1 220			*1 960	1 080	5.52
	-3			*3 310	2 570	*2 370	1 690					*1 870	1 430	4.55

# EQUIPMENT

● : Standard equipment

○ : Optional equipment

## ENGINE

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

## 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

Air suspension seat with heater	●
AM/FM radio	●
Anti-slip plate	●
Armrests	●
Ashtray	●
Auto control air conditioner	●
AUX. terminal and storage	●
Defroster	●
Drink holder	●
Electric horn	●
Floor mat	●
Glove compartment	●
Mechanical suspension seat with heater	○
Rain guard	○
Reclining seat	●
Reinforced, tinted glass window	●
Retractable seat belt	●
ROPS/OPG cab	●
Spare power supply	●
Storage box	●
Sun visor	○
Transparency roof with roll curtain	●
Window washer	●
Wiper	●
4 fluid-filled elastic mounts	●
12 V power source	○

## LIGHTS

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

## UPPER STRUCTURE

Auxiliary overload relief valve	○
Electrical fuel refilling pump with auto stop	○
Fuel level float	●
Pilot accumulator	○
Rear view camera	○
Rear view mirror (right, left side & cab rear)	●
Stack muffler	●
Tool box	●
Undercover	●
1 400 kg counterweight	●
370 kg additional 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.

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

Before using a machine with a satellite communication system, please make sure that the satellite communication system complies with local regulations, safety standards and legal requirements. If not so, please make modifications accordingly.

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.