

# ZX160LC-7H SPECIFICATIONS

HITACHI

LANDCROS

Reliable Solutions

ENGINE	
Model	Yanmar 4TN107
Type	4-cycle water-cooled, common rail direct injection
Aspiration	Turbocharged, intercooled, cooled EGR
Aftertreatment	DOC + CSF + SCR system
No. of cylinders	4
Rated power	
ISO 14396 : 2002 gross	136 HP (101.3 kW) at 1 900 min <sup>-1</sup>
ISO 9249 : 2007 net	132 HP (98.6 kW) at 1 900 min <sup>-1</sup>
Maximum torque	444 lbf (602 Nm) at 1 500 min <sup>-1</sup>
Piston displacement	278.697 cu.in. (4.567 L)
Bore and stroke	4.2" x 5.0" (107 mm x 127 mm)
Batteries	2 x 12 V / 93 Ah

HYDRAULIC SYSTEM	
Hydraulic Pumps	
Main pumps	2 variable displacement axial piston pumps
Maximum oil flow	2 x 50 gal/min (190 L/min)
Pilot pump	1 gear pump
Maximum oil flow	8.4 gal/min (31.9 L/min)
Hydraulic Motors	
Travel	2 variable displacement axial piston motors
Swing	1 axial piston motor
Relief Valve Settings	
Implement circuit	4 974.8 psi (34.3 MPa)
Swing circuit	4 249.6 psi (29.3 MPa)
Travel circuit	4 974.8 psi (34.3 MPa)
Pilot circuit	565.6 psi (3.9 MPa)
Power boost	5 511.4 psi (38.0 MPa)
Hydraulic Cylinders	
	Quantity
Boom	2
Arm	1
Bucket	1
	Bore
Boom	4.3" (110 mm)
Arm	4.7" (120 mm)
Bucket	4.1" (105 mm)
	Rod diameter
Boom	3.2" (80 mm)
Arm	3.5" (90 mm)
Bucket	3.0" (75 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	13.3 min <sup>-1</sup>
Swing torque	32 453 lbf (44.0 kNm)

UNDERCARRIAGE	
Tracks	
Upper rollers	2
Lower rollers	7
Track shoes	43
Track guards	1
Travel Device	
Travel speeds	High : 0 to 3.3 mph (0 to 5.3 km/h) Low : 0 to 2.1 mph (0 to 3.4 km/h)
Maximum traction force	36 869 lbf (164 kN)
Gradeability	70% (35 degree) continuous

SERVICE REFILL CAPACITIES	
Fuel tank	75.2 gal (285.0 L)
Engine coolant	6.1 gal (23.0 L)
Engine oil	5.8 gal (22.0 L)
Swing device	1.8 gal (6.9 L)
Travel device (each side)	1.8 gal (6.8 L)
Hydraulic system	55.4 gal (210.0 L)
Hydraulic oil tank	33.0 gal (125.0 L)
DEF/AdBlue® tank	9.2 gal (35.0 L)

ENVIRONMENT	
Engine Emissions	EPA Final Tier 4 / EU Stage V
Sounds Level	
Sound level in cab according to ISO 6396 : 2008	LpA 70 dB(A)
External sound level according to ISO 6395 : 2008 and EU Directive 2000/14/EC	LwA 100 dB(A)

# SPECIFICATIONS

**ZX160LC-7H**

## WEIGHTS AND GROUND PRESSURE

### Operating Weight and Ground Pressure

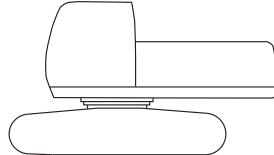
			ZX160LC-7H *	
Boom type			Monoblock	
Shoe type	Shoe width (inch (mm))	Arm length (ft-in (m))	lb (kg)	psi (kPa)
Triple grouser	24" (600)	8' 6" (2.58 m)	39 463 (17 900)	6.24 (43)
		10' 1" (3.08 m)	39 683 (18 000)	6.24 (43)
	28" (700)	8' 6" (2.58 m)	39 904 (18 100)	5.51 (38)
		10' 1" (3.08 m)	40 124 (18 200)	5.51 (38)

\* Including 0.68 yd<sup>3</sup> (0.52 m<sup>3</sup>) (ISO 7451: 2007 heaped) bucket weight (1 102 lb (500 kg)) and counterweight (6 724 lb (3 050 kg)).

## BASIC MACHINE WEIGHT AND COMPONENTS WEIGHT

### Basic Machine Weight and Overall Width

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



ZX160LC-7H			
Shoe type	Shoe width (inch (mm))	Weight lb (kg)	Overall width (inch (mm))
Triple grouser	24" (600)	32 634 (14 800)	8' 6" (2 600)

### Components Weight

Unit: lb (kg)

	ZX160LC-7H
Counterweight	6 724 (3 050)
Monoblock boom (with arm cylinder and boom cylinder)	3 748 (1 700)
Arm 8' 6" (2.58 m) (with bucket cylinder)	1 962 (890)
Arm 10' 1" (3.08 m) (with bucket cylinder)	2 094 (950)
Bucket ISO 7451 : 2007 0.68 yd <sup>3</sup> (0.52 m <sup>3</sup> )	1 102 (500)

## BUCKET AND ARM DIGGING FORCE

Unit: lbf (kN)

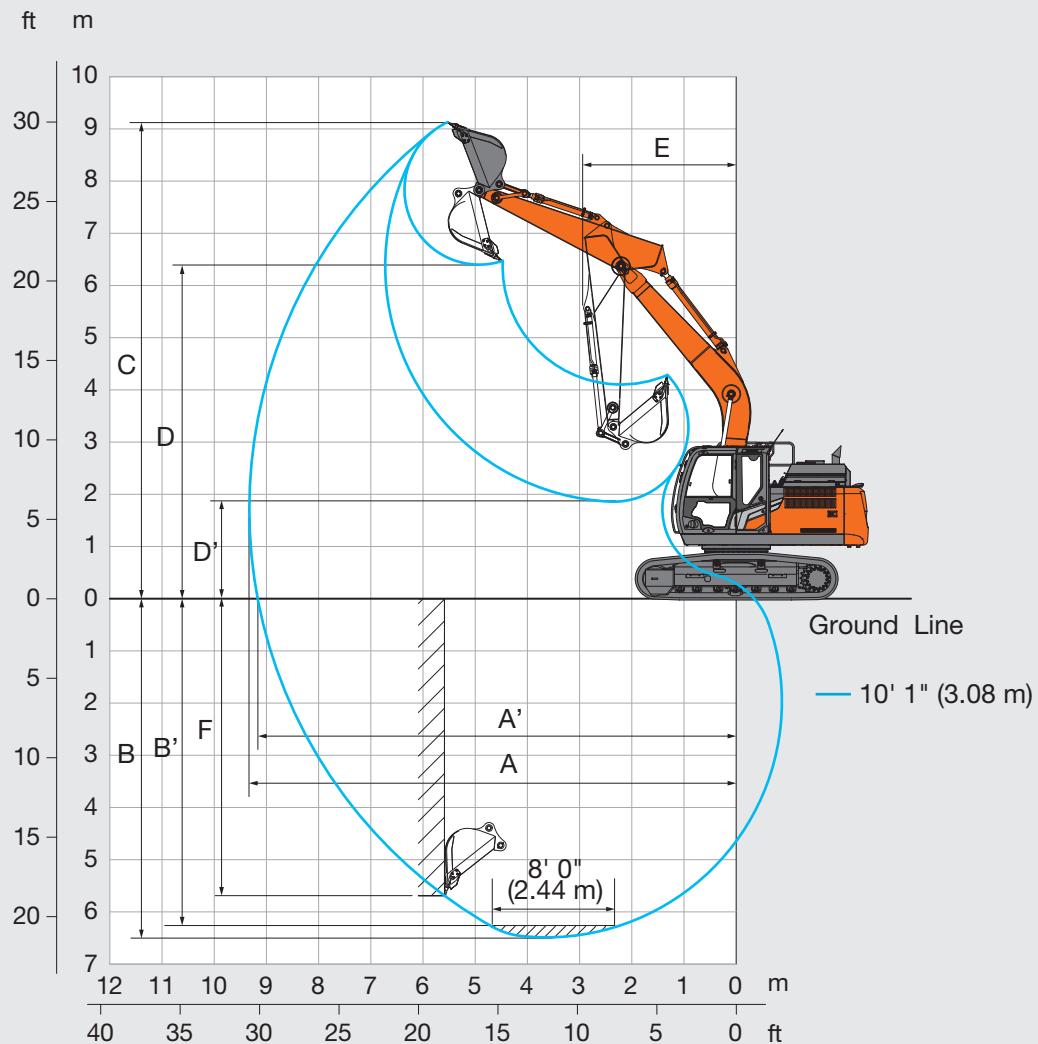
	ZX160LC-7H	
Arm length	8' 6" (2.58 m)	10' 1" (3.08 m)
Bucket digging force ISO 6015 : 2006	25 179 (112)	25 179 (112)
Arm crowd force ISO 6015 : 2006	20 458 (91)	18 209 (81)

Calculated value at power boost

# SPECIFICATIONS

**ZX160LC-7H**

## WORKING RANGES



Unit: ft-in (mm)

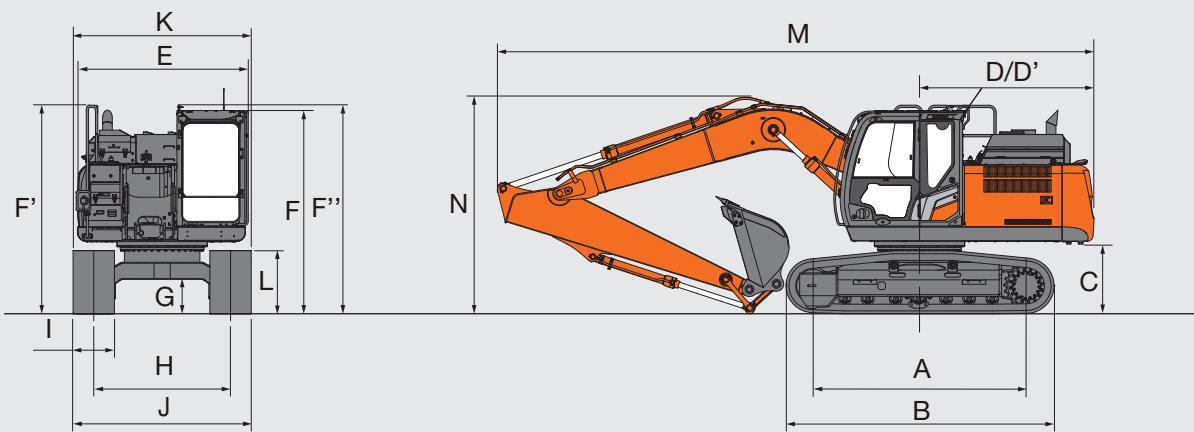
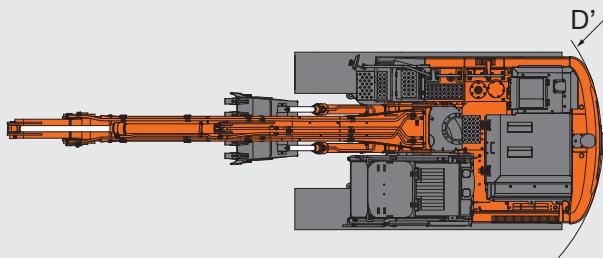
		ZX160LC-7H	
		Monoblock boom	
Arm length		8' 6" (2.58 m)	10' 1" (3.08 m)
A Max. digging reach		29' 1" (8 870)	30' 7" (9 330)
A' Max. digging reach (on ground)		28' 7" (8 700)	30' 1" (9 160)
B Max. digging depth		19' 7" (5 980)	21' 4" (6 490)
B' Max. digging depth for 8' 0" (2.44 m) level		18' 10" (5 740)	20' 7" (6 270)
C Max. cutting height		29' 2" (8 880)	29' 11" (9 130)
D Max. dumping height		20' 3" (6 170)	20' 12" (6 400)
D' Min. dumping height		7' 9" (2 360)	6' 1" (1 860)
E Min. swing radius		9' 7" (2 910)	9' 7" (2 920)
F Max. vertical wall digging depth		16' 11" (5 150)	18' 8" (5 690)

Excluding track shoe lug

# SPECIFICATIONS

**ZX160LC-7H**

## DIMENSIONS



Unit: ft-in (mm)

ZX160LC-7H	
Monoblock boom	
A Distance between tumblers	10' 2" (3 100)
B Undercarriage length	12' 10" (3 920)
*C Counterweight clearance	3' 3" (980)
D Rear-end swing radius	8' 4" (2 550)
D' Rear-end length	8' 4" (2 530)
E Overall width of upperstructure	8' 2" (2 500)
F Overall height of cab	9' 8" (2 950)
F' Overall height of handrail	9' 11" (3 030)
F" Overall height of handrail (on cab)	9' 11" (3 020)
*G Min. ground clearance	1' 7" (470)
H Track gauge	6' 6" (1 990)
I Track shoe width	G 1' 12" (600)
J Undercarriage width	8' 6" (2 590)
K Overall width	8' 6" (2 590)
*L Track height with triple grouser shoes	3' 0" (920)
Overall length	
M With Arm 8' 6" (2.58 m)	28' 3" (8 620)
With Arm 10' 1" (3.08 m)	28' 5" (8 650)
Overall height of boom	
N With Arm 8' 6" (2.58 m)	9' 5" (2 860)
With Arm 10' 1" (3.08 m)	10' 2" (3 110)

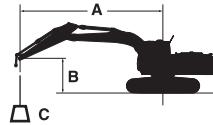
\* Excluding track shoe lug      G: Triple grouser shoe

# MACHINE CAPACITIES

## ZX160LC-7H

Notes:

1. Ratings are based on ISO 10567 : 2007.
2. Machine 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 ft (0 m) = Ground.



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

For machine capacities, subtract installed attachment and quick hitch weight from machine capacities.

To determine lifting capacities, apply "Rating over-side or 360 degrees" machine capacities from the table and deduct weight of installed attachment and quick hitch. Optional feature may affect machine performance.

### ZX160LC-7H MONOBLOCK BOOM

Rating over-front Rating over-side or 360 degrees Unit : lb (kg)

Conditions	Load point height (ft (m))	Load radius										At max. reach			
		5 ft (1.5 m)		10 ft (3.0 m)		15 ft (4.5 m)		20 ft (6.0 m)		25 ft (7.5 m)					
		Rating over-front	Rating over-side or 360 degrees		Rating over-front	Rating over-side or 360 degrees		Rating over-front	Rating over-side or 360 degrees		Rating over-front	Rating over-side or 360 degrees	ft-in (meter)		
Boom 16' 9" (5.10 m) Arm 8' 6" (2.58 m) Counterweight 6 724 lb (3 050 kg)	20' (6.0)							(*3 260)	(*3 260)				(*3 110)	(*3 110)	(6.05)
	15' (4.5)					*9 820 (*4 520)	*9 820 (*4 520)	*9 320 (*4 250)	7 640 (3 550)				*6 720 (*3 040)	6 300 (2 830)	22' 6" (6.89)
	10' (3.0)			*18 770 (*8 810)	*18 770 (*8 810)	*12 600 (*5 830)	11 240 (5 200)	*10 450 (*4 800)	7 370 (3 410)				*6 940 (*3 150)	5 560 (2 510)	24' 0" (7.33)
	5' (1.5)					*15 580 (*7 200)	10 510 (4 870)	10 880 (5 050)	7 050 (3 260)				*7 550 (*3 430)	5 290 (2 400)	24' 5" (7.44)
	0 (Ground)			*14 380 (*6 230)	*14 380 (*6 230)	16 300 (7 580)	10 070 (4 660)	10 620 (4 930)	6 810 (3 150)				8 330 (3 770)	5 400 (2 440)	23' 9" (7.23)
	-5' (-1.5)	*12 800 (*5 710)	*12 800 (*5 710)	*23 730 (*10 380)	18 230 (8 480)	16 150 (7 510)	9 940 (4 600)	10 530 (4 880)	6 730 (3 110)				9 280 (4 200)	5 980 (2 700)	21' 11" (6.69)
	-10' (-3.0)	*23 160 (*10 280)	*23 160 (*10 280)	*23 720 (*10 960)	18 570 (8 630)	16 310 (*7 560)	10 070 (4 660)						11 830 (5 310)	7 550 (3 390)	18' 7" (5.72)
	-15' (-4.5)												(*6 040)	(5 830)	(3.98)
Boom 16' 9" (5.10 m) Arm 10' 1" (3.08 m) Counterweight 6 724 lb (3 050 kg)	20' (6.0)							*7 090 (*3 350)	*7 090 (*3 350)				*5 650 (*2 550)	*5 650 (*2 550)	21' 6" (6.61)
	15' (4.5)							*8 380 (*3 820)	7 730 (3 590)				*5 510 (*2 500)	*5 510 (*2 500)	24' 1" (7.38)
	10' (3.0)			*15 700 (*7 360)	*15 700 (*7 360)	*11 310 (*5 230)	*11 310 (*5 230)	*9 640 (*4 420)	7 420 (3 440)	*6 690 (*3 330)	5 230 (2 430)		*5 680 (*2 580)	5 050 (2 280)	25' 6" (7.79)
	5' (1.5)			*18 130 (*7 530)	*18 130 (*7 530)	*14 530 (*6 720)	10 620 (4 920)	10 910 (5 060)	7 060 (3 270)	7 810 (3 620)	5 080 (2 360)		*6 130 (*2 780)	4 810 (2 180)	25' 11" (7.89)
	0 (Ground)			*15 680 (*6 810)	*15 680 (*6 810)	16 310 (7 580)	10 060 (4 660)	10 590 (4 910)	6 770 (3 140)	7 680 (3 560)	4 960 (2 300)		*6 980 (*3 160)	4 880 (2 210)	25' 3" (7.70)
	-5' (-1.5)	*11 500 (*5 130)	*11 500 (*5 130)	*21 900 (*9 600)	18 010 (8 380)	16 040 (7 460)	9 830 (4 560)	10 430 (4 840)	6 630 (3 070)				8 280 (3 750)	5 320 (2 410)	23' 7" (7.20)
	-10' (-3.0)	*19 530 (*8 670)	*19 530 (*8 670)	*25 070 (*11 580)	18 240 (8 480)	16 100 (7 480)	9 880 (4 580)	10 500 (4 860)	6 690 (3 090)				10 120 (4 550)	6 470 (2 910)	20' 7" (6.30)
	-15' (-4.5)			*19 890 (*9 310)	18 860	*13 200 (*6 250)	10 280 (4 740)						*12 720 (*5 740)	9 920 (4 360)	15' 5" (4.79)

# SPECIFICATIONS

## ZX160LC-7H

### ZX160LC-7H BUCKET SELECTION

The buckets recommended for installation on this machine are representative only. Actual weights and dimensions should be used to determine acceptability.

\* Optional equipment such as Thumb and Coupler are not included.

ZX160LC-7H	Bucket					Arm Length		
	Width		Capacity		Weight			
	in	mm	yd <sup>3</sup>	m <sup>3</sup>	kg	kg	10' 1"	8' 6"
24	610	0.97	0.74	1,400	635	●	-	
24	610	1.08	0.83	1,500	680	-	●	
30	762	1.10	0.84	1,500	680	○	-	
30	762	1.22	0.93	1,600	726	-	○	
36	914	1.28	0.98	1,600	726	○	-	
36	914	1.35	1.03	1,900	862	-	○	
42	1,067	1.40	1.07	2,000	907	▲	-	
42	1,067	1.45	1.11	2,300	1,043	-	▲	
48	1,219	1.45	1.11	2,200	998	△	-	
48	1,219	1.49	1.14	2,600	1,179	-	△	
Maximum load with pin-on (Bucket + Payload)				lb	4,810	5,290		
				kg	2,180	2,400		

- : Suitable for materials with density of 3,500 lb/yd<sup>3</sup> (2,100 kg/m<sup>3</sup>) or less.
- : Suitable for materials with density of 3,000 lb/yd<sup>3</sup> (1,800 kg/m<sup>3</sup>) or less.
- : Suitable for materials with density of 2,500 lb/yd<sup>3</sup> (1,500 kg/m<sup>3</sup>) or less.
- ▲ : Suitable for materials with density of 2,000 lb/yd<sup>3</sup> (1,200 kg/m<sup>3</sup>) or less.
- △ : Suitable for materials with density of 1,800 lb/yd<sup>3</sup> (1,100 kg/m<sup>3</sup>) or less.
- : Suitable for materials with density of 1,500 lb/yd<sup>3</sup> (900 kg/m<sup>3</sup>) or less.
- : Not applicable

Maximum load with pin-on (Bucket + Payload) complies with ISO 10567: 2007.

Using a bucket heavier or wider than recommended specifications may result in less than optimal performance, including reduced productivity, stability, reliability and component durability.

Improper use of the bucket to sweep, pry, twist or snag heavy loads will shorten the life of the boom and arm.

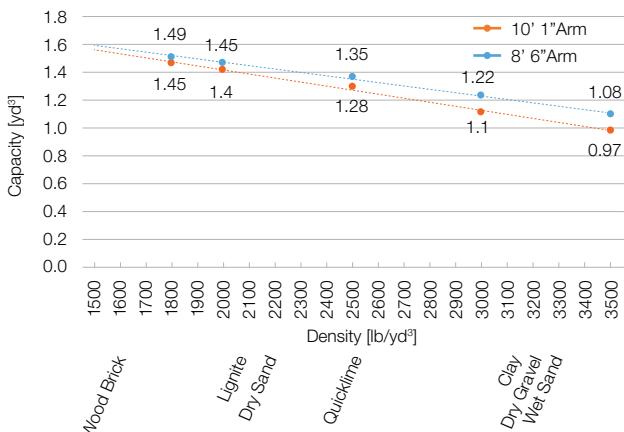
#### [Reference]

Example calculation for Maximum Load of 7,450 lb.

$$\begin{aligned}
 \text{Load with pin-on (Bucket + Payload)} &= \text{Bucket weight} + \text{Payload} (\text{Bucket capacity} \times \text{Material density}) \\
 &= 1,708 \text{ lb} + (1.36 \text{ yd}^3 \times 3,500 \text{ lb/yd}^3) \\
 &= 6,468 \text{ lb} < \text{Maximum Load 7,450 lb} \rightarrow \text{OK}
 \end{aligned}$$

Example calculation for Maximum Load of 7,450 lb and Attachment (Thumb and coupler etc) weight of 1,800 lb.

$$\begin{aligned}
 \text{Load with pin-on (Bucket + Payload)} &= \text{Bucket weight} + \text{Payload} (\text{Bucket capacity} \times \text{Material density}) + \text{Attachment weight} \\
 &= 1,708 \text{ lb} + (1.36 \text{ yd}^3 \times 2,800 \text{ lb/yd}^3) + 1,800 \text{ lb} \\
 &= 7,316 \text{ lb} < \text{Maximum Load 7,450 lb} \rightarrow \text{OK (Up to 2,800 material density can be used)}
 \end{aligned}$$



# EQUIPMENT

## ZX160LC-7H

ENGINE	ZX-7H 160LC
Aftertreatment device	●
Air cleaner double filters	●
Alternator 80 A	●
Auto idle system	●
Auto shut-down control	●
Belt auto tensioner	●
Cartridge-type engine oil filter	●
Cartridge-type fuel main filter	●
ConSite OIL (sensor)*	○
DEF / AdBlue® tank	●
DEF / AdBlue® tank inlet strainer and extension filler	●
Dry-type air filter with evacuator valve (with air filter restriction indicator)	●
Dust-proof indoor net	●
ECO / PWR / HP 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	○
Oil separator	●
Radiator, oil cooler and intercooler	●

CAB	ZX-7H 160LC
Auto control air conditioner	●
AUX function lever (breaker)	●
AUX function lever (breaker assist)	○
Bluetooth® integrated radio	●
Cab : All-weather sound suppressed steel	●
Cab : CRES VII (center pillar reinforced structure)	●
Cab : OPG top guard Level I (ISO 10262 : 1998) compliant	●
Cab : ROPS (ISO 12117-2 : 2008) compliant	●
Console height adjustment	●
Control lever auto-lock	●
Drink holder with hot and cool function	●
Electric double horn	●
Engine shut-off switch	●
Equipped with reinforced, tinted (green color) glass windows	●
Evacuation hammer	●
Floor mat	●
Footrest	●
Front guard : OPG Level II (ISO 10262 : 1998) compliant	○
Front window washer (1 point)**	●
Front window washer (2 points)**	○
Glove compartment	●
Hands-free calling device	●
Hot and cool box	●
Intermittent windshield wipers	●
Key cylinder light	●
LED room light	●
Magazine rack	●
Pilot shut-off lever	●
Power outlet 12 V and 24 V	●
Push button low idle	●
Rain guard (without OPG front guard)	●
Rear tray	●
Retractable seat belt 3 in. (76 mm)	●
Rubber radio antenna	●
Seat : air suspension seat with heater	●
Seat adjustment part : backrest, armrest, height and angle, slide forward / back	●
Seat belt reminder	●
Short wrist control levers	●
Smartphone holder	●
Straight travel pedal	○
Sunscreen roller type (multi-use front or side and rear window)	●
Top guard: OPG Level II (ISO 10262 : 1998) compliant	○
Transparent roof with slide curtain	●
USB power supply	●
Wide view wiper	○
Windows on front, upper, lower and left side can be opened	●
2 speakers	●
4 fluid-filled elastic mounts	●
8 inch monitor	●

● : Standard equipment ○ : Optional equipment

MONITOR SYSTEM	ZX-7H 160LC
Alarm buzzers: overheat, engine oil pressure, overload, SCR system trouble, etc	●
Alarms: overheat, engine warning, engine oil pressure, alternator, minimum fuel level, hydraulic filter restriction, air filter restriction, work mode, overload, SCR system trouble, etc	●
Display of meters: water temperature, hour, fuel rate, clock, DEF / AdBlue® rate, etc	●
Other displays: work mode, auto-idle, glow, rearview monitor, operating conditions, etc	●
35 languages selection	●

LIGHTS	ZX-7H 160LC
Additional boom LED light with cover	●
Additional cab roof front LED lights	●
Additional cab roof rear LED lights	●
LED lights for camera (side and rear view camera)	○
Rotating lamp	○
2 working LED lights	●

UPPER STRUCTURE	ZX-7H 160LC
AERIAL ANGLE (270-degree view camera system)	●
Batteries 2 x 93 Ah	●
Body top handrail	●
Cab top handhold	●
Control pattern changer (ISO / BH)	●
Counterweight 6 724 lb (3 050 kg)	●
Electric fuel refilling pump with auto stop and filter	●
Fuel level float	●
HD undercover	○
Hydraulic oil level gauge	●
Lockable fuel refilling cap	●
Lockable machine covers	●
Lockable tool box	●
Platform handrail	●
Side view mirror (right and left)	●
Skid-resistant plates	●
Swing parking brake	●
Undercover	●
2 way battery disconnect switch	●

HYDRAULIC SYSTEM	ZX-7H 160LC
Auto power lift	●
ConSite OIL (sensor)*	○
Control valve with main relief valve	●
Equipment package for lifting objects	○
Extra port for control valve	●
High mesh full flow filter	●
Hose rupture valve for arm	○
Hose rupture valve for boom	○
Pilot filter	●
Power boost	●
Restriction indicator for full flow filter	○
Suction filter	●
Swing dampener valve	●
Variable reliefvalve for breaker and crusher	●
Work mode selector	●

# EQUIPMENT

## ZX160LC-7H

UNDERCARRIAGE	ZX-7H 160LC
Bolt-on sprocket	●
Greasing type track adjuster	●
Reinforced track links with pin seals	●
Shoe: 24" (600 mm) triple grouser	●
Shoe: 28" (700 mm) triple grouser	○
Towing hole for light weight object	●
Track undercover	○
Travel direction mark on track frame	●
Travel motor covers	●
Travel parking brake	●
Upper and lower rollers	●
1 track guard (each side)	●
4 tie down brackets	●

ATTACHMENTS	ZX-7H 160LC
Accessories for 2 speed selector	○
Additional pump (7.9 gal (30 L)/min)	○
Assist piping	○
Breaker and crusher piping (Short piping)	○
Breaker and crusher piping	●
Pilot accumulator	○
Quick coupler piping	○

● : Standard equipment ○ : Optional equipment

MISCELLANEOUS	ZX-7H 160LC
ConSite	○
Global e-Service	●
Onboard information controller	●
Satellite communication device	○
Standard tool kit	●
Travel alarm	●

QUICK LINKS	ZX160LC-7H
Website's Product Page	

FRONT ATTACHMENTS	ZX-7H 160LC
Arm 8' 6" (2.58 m)	○
Arm 10' 1" (3.08 m)	●
Arm tip remote lubrication	●
Casted bucket link A	●
Centralized lubrication system	●
Dirt seal on all bucket pins	●
Flanged pin	●
HN bushing	●
Lower arm reinforcement	●
Reinforced resin thrust plate	●
Reinforced bucket link B	●
WC (tungsten-carbide) thermal spraying	●

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

\* Engine oil and hydraulic oil monitoring sensor.

\*\* Front window washer (1 point) is only when equipped with standard wiper.

Front window washer (2 points) is only when equipped with wide view wiper.