# **HITACHI**





## **HYDRAULIC EXCAVATOR**

- Model Code: ZX10U-2 Engine Rated Power: 9.5 kW (12.8 HP)
- Operating Weight: 1 110 kg
  Backhoe Bucket: 0.022 m<sup>3</sup>

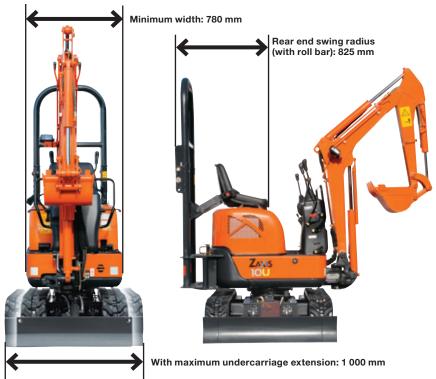
Versatile excavator with adjustable width for efficient use in various applications—smooth movement in confined spaces, as well as powerful operation in open areas

### Minimum width: 780 mm

### **Powerful Engine**

### Rear end swing radius: 825 mm





#### Compact Body with Short Rear End

The compact short rear end design allows efficient operation even in confined spaces.

#### Retractable Undercarriage and Blade

The unit can extend up to 1 000 mm during jobs, thanks to the retractable undercarriage and blade.

Notes: Some of the pictures in this catalog show an unmanned machine with attachments in an operating position. These were taken for demonstration purposes only and the actions shown are not recommended under normal operating conditions.

#### **Powerful Operation**



**Two Travel Speeds Provided** Two different travel speeds are available: high (4.0 km/h) and low (2.0 km/h) making transport of the machine through the jobsite more efficient and smooth. A new tread pattern is adopted for the rubber shoe and operating vibration suppressed.

#### Travel speeds: High 0 to 4.0 km/h Low 0 to 2.0 km/h



**Powerful, Large Exhaust Capacity Three-Cylinder Engine** Packing substantial power for tough excavating jobs.

- Engine rated power: 9.5 kW
- Total piston displacement: 854 mL (cc)
- Bucket digging force: 11.8 kN



**Hydraulic Pilot Control Levers** Hydraulic pilot control levers provide smooth control and easy operation.



**Outside Flange Type Lower Roller** Riding comfort is enhanced due to the increased horizontal stability.

#### **Comprehensive Safety Features**



#### Lock Lever Allows Lock/Neutral Engine Starting

A lock lever lets you shut off not only Front & Swing but also traveling operation. A neutral engine start feature is also provided, allowing engine start only when the lock lever is at the lock position.



Easy-Access Ignition Switch, Easy-View Monitor Simple, easy-to-understand status indicators.



**Collapsible Roll Bar** The collapsible roll bar conforming to TOPS\* makes the unit more compact for greater ease in transporting.

\* TOPS: Tip-Over Protection Structure (for preventing injury in tipping accidents)

### Wealth of convenient design features

### Hinged seat

Fuel tank capacity of 16 Liters

Neutral engine start feature



#### Simple, Time-Saving Maintenance



**Hinged Seat** Since the seat can be tipped forward, it can be used immediately after rainy weather, without the need for cleaning.



High-Capacity Fuel Tank with Wide Inlet

Thanks to the high-capacity fuel tank, operating time between refueling has been extended.





**Wide-Opening Cover** The machine cover opens wide for easy maintenance and cleaning of the radiator.

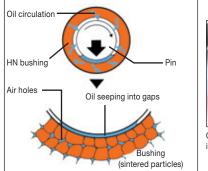
#### **Rugged Construction and High Durability Throughout**



Main Frame Protects The Body from Shocks

Single-unit counterweighted main frame effectively protects the body from unexpected shocks.

#### **Movement Principle of HN Bush**





Oil is shown seeping in this photograph, for purposes of illustration.

**HN Bushing** Reliable, job-proven HN bushings are used at all pin joints at the front and the blade. The lubrication intervals have been extended to 500 hours, contributing to reduced scraping and grinding of the pins and bushings.

## EQUIPMENT

#### ENGINE

Model Type	Yanmar 3TNV70 Water-cooled, 4-cycle, 3-cylinder swirl combustion chamber injection type diesel engine
Rated power	
ISO 9249, net	9.5 kW (12.8 HP) at 2 100 min <sup>-1</sup> (rpm)
Maximum torque	50.5 N.m (5.1 kgf.m) at 1 500 min <sup>-1</sup> (rpm)
Piston displacement	0.854 L
Bore and stroke	70 mm x 74 mm
Batteries	1 x 12 V/36 Ah

#### HYDRAULIC SYSTEM

The proven 2-pump system has been improved to make combined operations and fine control easier and smoother.

Main pumps	2 gear pumps
Maximum oil flow	2 x 10.6 L/min
Pilot pump	1 gear pump
Maximum oil flow	5.3 L/min

#### **Relief Valve Settings**

Main pumps circuit	17.7 MPa (181 kgf/cm <sup>2</sup> )			
Pilot circuit	3.9 MPa (40 kgf/cm <sup>2</sup> )			

#### **Hydraulic Cylinders**

High-strength piston rods and tubes. Cylinder cushion mechanisms provided in boom raise and arm roll-in circuits to absorb shocks at stroke ends.

#### Dimensions

	Quantity	Bore Rod diameter		Stroke
Boom	1	55 mm	30 mm	355 mm
Arm	1	50 mm	30 mm	356 mm
Bucket	1	50 mm	25 mm	282 mm
Boom swing	1	50 mm	25 mm	260 mm
Blade	1	50 mm	25 mm	87 mm
Span	1	50 mm	25 mm	273 mm

#### CONTROLS

Boom, arm, bucket, and swing are hydraulic pilot system. Travel, boom swing, blade, variable leg and reserve are mechanical.

#### SWING MECHANISM

High-torque, orbit motor. Swing circle is single-row, shear-type ball bearing with induction-hardened internal gear. Internal gear and pinion are immersed in lubricant.

Swing speed ...... 8.5 min<sup>-1</sup> (8.5 rpm)

#### UNDERCARRIAGE

#### Tracks

Tractor-type undercarriage. Welded track frame using carefully selected materials. Side frame extended by span cylinder.

#### Numbers of Rollers on Each Side

Lower rollers ..... 3

#### Travel Device

Each track driven by a high-torque, 2-speed axial piston motor through planetary reduction gear, allowing counter-rotation of the tracks.

Travel speeds	High: 0 to 4.0 km/h
(with rubber shoes)	Low: 0 to 2.0 km/h
Gradeability	58% (30 degree) continuous

#### WEIGHTS AND GROUND PRESSURE

Equipped with 0.81 m arm and 0.022 m<sup>3</sup> (ISO 7451 capacity) bucket.

	Operating weight	Ground pressure		
180 mm rubber shoes	1 110 kg	24 kPa (0.25 kgf/cm <sup>2</sup> )		

#### SERVICE REFILL CAPACITIES

Fuel tank	
Engine coolant	3.3 L
Engine oil	
Travel device (each side)	0.33 L
Hydraulic system	18.0 L
Hydraulic oil tank (Reference oil level)	12.0 L

#### **BACKHOE ATTACHMENTS**

#### **Buckets**

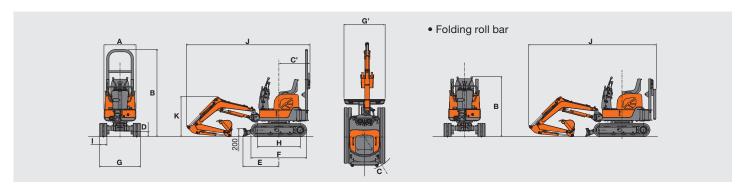
Capacity Width		No. of tooth	Waight	Front Attachment		
ISO 7451	Without side cutters	With side cutters	No. of teeth Weight		0.81 m arm	0.96 m arm
0.018 m <sup>3</sup>	300 mm	320 mm	3	15.0 kg	A	А
0.022 m <sup>3</sup>	350 mm	370 mm	3	16.2 kg	A	В
0.024 m <sup>3</sup>	380 mm	400 mm	3	16.9 kg	В	В
Arm crowd force	1	5.9 kN (610 kgf)	5.5 kN (570 kgf)			
Bucket digging for	orce	11.7 kN (1 200 kgf)	11.7 kN (1 200 kgf)			

A: General digging

B: Light-duty digging

## SPECIFICATIONS

#### DIMENSIONS

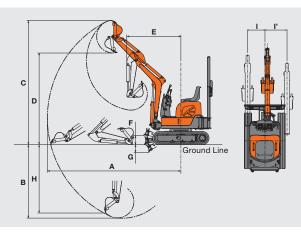


#### Note:

The illustration shows the ZX10U-2 equipped with 0.81 m arm and 180 mm rubber shoes. The Roll Bar conforms to TOPS (ISO 12117) requirements.

		Unit: mm
		ZX10U-2
Α	Overall width	780
В	Overall height (Folding roll bar)	2 150 (1 450)
С	Rear-end swing radius	825
C'	Rear-end swing length (with roll bar)	760
D	Min. ground clearance	130
Е	Horizontal distance of blade installation	885
F	Undercarriage length	1 360
G	Undercarriage width: Extended / Retracted	1 000 / 760
G'	Blade width: Extended / Retracted	1 000 / 780
Н	Distance between tumblers	1 040
Ι	Track shoe width	180
J	Max. transport length (Folding roll bar)	3 020 (3 090)
K	Overall height of boom	970

#### **WORKING RANGES**



#### Note:

The illustration shows the ZX10U-2 equipped with 0.022  $\rm m^3$  bucket, 0.81 m arm and 180 mm rubber shoes.

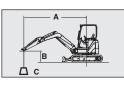
		Unit: mm
		ZX10U-2
А	Max. digging reach	3 220
В	Max. digging depth	1 780
С	Max. cutting height	3 010
D	Max. dumping height	2 220
Е	Min. swing radius (At max. boom swing)	1 310 (1 100)
F	Blade bottom highest position above ground	220
G	Blade bottom lowest position above ground	190
Н	Max. vertical wall	1 670
171	Offset distance (Max. boom-swing angle degrees)	420 (55)/535 (65)

## LIFTING CAPACITIES

#### **Metric measure**

- Notes: 1. Rating are based on ISO 10567.
  - 2. Lifting capacity of the ZAXIS Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% full hydraulic capacity.
  - 3. Load point is the center line of the Bucket pivot mounting Pin on the Arm. Side: Rating over-side or 360 degrees Front: Rating over-front
  - 4. An asterisk mark (\*) indicates load limited by hydraulic capacity.

#### ZX10U-2 Blade above Ground, 0.81 m Arm



A: Load radius

B: Load point height C: Lifting capacity

Rating over-side or 360 degrees

🖥 Rating over-front Unit: kg

Unit: kg

Unit: kg

Unit: kg

	Load point height	Load radius				At may march		
Conditions		1.0 m		2.0 m		At max. reach		
Conditions			ů	÷	Ů	÷	Ů	meter
Rubber shoes 180 mm	1.0 m			210	250	130	150	2.80
	0 (Ground)			200	240	130	150	2.73
	-1.0 m	610	*730	200	240	190	230	2.10

#### ZX10U-2 Blade on Ground, 0.81 m Arm

		Load radius				At max. reach		
Conditions	Load point height	1.0 m		2.0 m		At max. reach		
Conditions	Loud point hoight	٩	ů	<b></b>	Ů	( <b>D</b> )	ů	meter
Rubber shoes 180 mm	1.0 m			210	*280	130	340	2.80
	0 (Ground)			200	*380	130	350	2.73
	-1.0 m	610	*730	200	*270	190	540	2.10

#### ZX10U-2 Blade above Ground, 0.96 m Arm

Conditions	Load point height	Load radius				At max. reach		
		1.0 m		2.0 m		At max. reach		
		(i)•	Ů	÷	Ů	÷	Ů	meter
Rubber shoes 180 mm	1.0 m			180	*250	100	140	2.93
	0 (Ground)			160	230	100	140	2.86
	-1.0 m	500	770	160	230	140	200	2.27

#### ZX10U-2 Blade on Ground, 0.96 m Arm

Conditions	Load point height	Load radius				At max. reach		
		1.0 m		2.0 m		At max. reach		
		( <b>D</b>	ů	÷	Ů	( <b>D</b>	ů	meter
Rubber shoes 180 mm	1.0 m			180	*260	100	310	2.93
	0 (Ground)			160	*370	100	320	2.86
	-1.0 m	500	*860	160	*310	140	470	2.27

## EQUIPMENT

#### STANDARD EQUIPMENT

#### ENGINE

Neutral engine start system

#### HYDRAULIC SYSTEM

- Hydraulic pilot type control levers
- Pilot control shut-off levers
- Two-speed travel system
- Piping for attachments

#### **OPERATOR'S ROOM**

- TOPS roll bar
- Seat belt
- 12 V outlet
- Work light

#### **OPTIONAL EQUIPMENT**

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

#### UNDERCARRIAGE

- Retractable undercarriage
- 180 mm rubber shoes
- Retractable blade

#### FRONT ATTACHMENTS

- HN bushing
- 1.46 m boom
- 0.81 m arm

Optional equipment may vary by country, so please consult your Hitachi dealer for details.

#### **OPERATOR'S ROOM**

• NS (New Standard) key

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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