

ZAXIS-5 series Short-tail-swing version

**HITACHI**

Reliable solutions

# ZAXIS17U / 19U



## HYDRAULIC EXCAVATOR

Model Code : ZX17U-5

ZX19U-5

Engine Rated Power : 10.6 kW (14.2 HP)

Operating Weight ZX17U-5 : 1 760 kg

ZX19U-5 : 1 860 kg

Backhoe Bucket ISO Heaped : 0.044 m<sup>3</sup>



# WALK AROUND

## CONTENTS

### 4-5 Performance

Hitachi mini excavators are renowned for durability, and deliver high levels of productivity with reduced running cost.

### 6-7 Comfort

The cab of the new Hitachi mini excavators is spacious and comfortable, with more leg room, enhanced visibility and user-friendly features.

### 8-9 Maintenance

Quick and easy cleaning and maintenance can be carried out on the new ZAXIS 17U / 19U thanks to convenient and accessible features.

### 10-17 Specifications

### Increased workload & reduced cycle time

The ZAXIS mini excavator is capable of a higher workload in less time than competitor machines.

### Enhanced durability

The new ZAXIS mini excavator is capable of working in tough conditions thanks to improvements such as a boom cylinder guard, V-shaped cylinder cover and D-frame.

### Greater versatility

If space is limited or greater stability is needed, the expandable crawler track makes the new ZAXIS mini excavator suitable for a wide range of applications.



# ZAXIS 17U / 19U

The new Hitachi ZAXIS 17U and 19U mini excavators have been designed with one aim – to enable our customers to make their visions a reality. Performance, comfort and easy maintenance were key concepts in their development, but they also live up to the Hitachi standards for reliability, durability and versatility. For owners, this means highly productive and efficient machines; for operators, they are user-friendly, and extremely comfortable and safe to work with. The easy maintenance features and the Hitachi Support Chain after-sales programme enable the new ZAXIS mini excavators to work at optimum levels for longer periods, bringing additional profitability to your business.

### High-grade canopy space

For enhanced operator comfort and visibility, the new ZAXIS mini excavator has a three-post canopy design.



### Short-tail swing radius

The short-tail swing radius makes the ZAXIS mini excavator ideal for working in confined spaces, particularly in urban areas on road construction and utilities projects.

### Quick and easy service access

The new ZAXIS has wide covers that are easy to open, and the radiator and oil cooler are conveniently located side by side.



# PERFORMANCE

The new ZAXIS mini excavator range delivers high levels of productivity, excellent fuel efficiency and durability on a variety of construction projects. The ZAXIS 17U and 19U are specifically designed for working in narrow or confined spaces, and for utilities, foundation work, landscaping and indoor demolition or construction. Lightweight and compact, they can be easily transported from one job site to another. Thanks to several new design features, they are guaranteed to give an outstanding level of performance wherever they work.



# Tested reliability and durability on a variety of projects



## Exceptional productivity

The performance of the new ZAXIS mini excavators was a key consideration in their design. Highly productive and fuel efficient, versatile for various sites and compact for working in confined areas, the ZAXIS 17U and 19U were made to boost your company's profitability and be invaluable additions to any fleet.

Compared with other mini excavators, the ZAXIS 17U and 19U are leading the pack in terms of cycle times and workload. Data has shown the cycle time is 9% quicker and the workload is 10% greater than competitor machines with the new ZAXIS mini excavators\*.

Compared with previous Hitachi models, the ZAXIS 17U and 19U are capable of higher levels of productivity – using the same amount of fuel – as a result of greater hydraulic efficiency.

The crawler track of both models can be expanded or retracted, depending on the requirements of the job site. For example, the width of the excavator can be narrowed to 980 mm for working in small spaces or being loaded on to a truck, and widened to 1 280 mm for greater stability.

To achieve the new compact shape of the machines, the boom foot position was moved by 110 mm toward the axis of rotation, and the top of the rotating platform was brought down by 70 mm.

*\* Based on the measurement with the Hitachi test rule*

## Greater durability

The new ZAXIS mini excavators are extremely reliable, thanks to a range of new and improved features. The front of the machine is highly durable and fitted with a boom cylinder guard. It has a new V-shaped boom cylinder cover with two bolts for added durability. The bucket hose is stored in the arm and the front hose is split for easier replacement.

Both the ZAXIS 17U and 19U have a large opening for greasing the track adjuster, which makes this process quick and easy. HN bushing requires front greasing at 500 hours and bucket circumference greasing at 100 hours. Hitachi has also upgraded the rubber crawlers for enhanced durability.

The dimensions of the hose and pipe have been fine-tuned to prevent oil leaks. To enhance the reliability of the new ZAXIS mini excavator, a double clam and screw type check valve have been introduced.

Further improvements to the previous model include lengthening the undercover of the revolving platform frame on the ZAXIS 17U and 19U, and changing to a D-frame for added durability.

## Key features

- High performance
- Auto shift traveling system
- Efficient hydraulic system

- Hose protection
- Boom cylinder guard



# COMFORT

Operator comfort was a top priority for Hitachi design engineers when they started working on the new ZAXIS 17U and 19U mini excavators. Although the machines had to be compact to fit into narrow and confined areas, the cab had to provide a spacious and pleasant working environment. This was achieved by enhancing visibility from the wide and luxurious seat, incorporating user-friendly features, and creating a greater sense of space than previous Hitachi models.



# Easy to operate, even for first-time users



## From the comfort of the cab

Working long shifts in the cab of a mini excavator is much easier with a comfortable place to sit. The new ZAXIS 17U and 19U mini excavators have a wide and adjustable sliding suspension seat, which is surrounded by user-friendly controls within easy reach. Noise levels, even with the canopy design, are lower than previous models and competitor machines, allowing work to be carried out comfortably.

## Enhanced visibility

The three-post canopy design (compared to four posts on some competitor models) provides enhanced visibility of the job site. This is particularly important on busy construction sites and in confined spaces to ensure the safety of the operator and avoid any unnecessary damage to the machine. It is also compatible with ROPS and OPG top guard (Level 1).

## At your fingertips

The new ZAXIS 17U and 19U mini excavators have a simple and straightforward switch layout for ease of use, ideal for first-time users of the machine in the rental market. Hydraulic pilot levers are used to control the front, boom swing, travel and blade of the excavator. The control levers also have reduced backlash for added operator comfort.

The swing parking brake activates with the lock lever to safely park the excavator. The mechanical flip-up type lock lever was chosen by Hitachi design engineers to give operators easy access to the ZAXIS mini excavator.

An optional theft-deterrent ten-key lock system is available for the ZAXIS 17U. It saves and deletes the four-digit registration number and controls the starting of the engine.

## Key features

■ Enhanced visibility

■ Easily accessible information

■ Expansive leg room

■ Wide and comfortable seat

■ Folding foot pedals and adjustable armrest



# MAINTENANCE

Convenient maintenance features are an integral part of the user-friendly design of the new ZAXIS mini excavators. They allow you to carry out quick and easy cleaning, and routine maintenance to ensure high levels of availability and an optimum performance wherever you are working. The ZAXIS 17U and 19U have benefitted from several improvements to the previous design, with the aim to provide you with stress-free days on the job site.



# Quick and convenient maintenance solutions to make life easier



## Easy access

Parts requiring daily inspection can be easily accessed thanks to two redesigned covers on the new ZAXIS 17U and 19U. The engine cover slides vertically for quick and easy maintenance in confined areas and narrow job sites.

The radiator cover opens out wide using a one-push mechanism revealing the radiator and oil cooler, which have been arranged side by side to achieve greater cooling efficiency and for easy cleaning. Enlarged intake vents also enhance the cooling effectiveness, so the excavator can be used for many hours on tough job sites without overheating.

## Quick refuelling

The ZAXIS 17U and 19U are easier to refuel than the previous Hitachi models thanks to a redesigned tank cover and more space around the fuel tank opening. A larger fuel strainer (50 mm diameter, identical to the ZAXIS 33U) has also been added to prevent fuel overflowing.

## Long intervals

The maintenance intervals for oiling and greasing on the ZAXIS 17U and 19U are relatively low, which reduces the amount of time spent on lubrication and lowers running costs.

## Easy cleaning

The back of the blade of the ZAXIS 17U and 19U is slanted and shaped to minimise the build-up of dirt and make it easier to remove.

The layout of the equipment such as the engine, pumps, filters, starter, alternator and control valve has been purposely designed for easy maintenance.

## Support Chain

To further protect your investment in your new ZAXIS mini excavator, the Hitachi Support Chain after-sales programme gives you the flexibility to create a tailor-made service plan. This can include: Global e-Service, technical support, extended warranty and service contracts, and parts and remanufactured components. Each one of these is a link in the chain of service available from Hitachi via your local dealer. For more details, please contact your local dealer.

## Key features

- Easy refuelling
- Improved grease points
- Easy to open covers
- Global e-Service (optional)



# SPECIFICATIONS

## ZX17U-5 / ZX19U-5

### ENGINE

Model .....	3TNV70
Type .....	Water-cooled, 4-cycle, swirl combustion chamber injection type diesel engine
No. of cylinders .....	3
Rated power	
ISO 9249, net .....	10.6 kW (14.2 HP) at 2 400 min <sup>-1</sup> (rpm)
EEC 80/1269, net .....	10.6 kW (14.2 HP) at 2 400 min <sup>-1</sup> (rpm)
SAE J1349, net .....	10.6 kW (14.2 HP) at 2 400 min <sup>-1</sup> (rpm)
Maximum torque .....	48.8 Nm (49.8 kgfm) at 1 800 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

#### Hydraulic Pumps

Main pumps .....	2 variable displacement axial piston pumps 1 gear pump
Maximum oil flow .....	2 x 19.2 L/min 1 x 10.8 L/min
Pilot pump .....	1 gear pump
Maximum oil flow .....	6.5 L/min

#### Hydraulic Motors

Travel .....	2 variable displacement axial piston motors
Swing .....	1 gear pump

#### Relief Valve Settings

Implement circuit .....	20.6 MPa (210 kgf/cm <sup>2</sup> )
Swing circuit .....	13.7 MPa (140 kgf/cm <sup>2</sup> )
Travel circuit .....	20.6 MPa (210 kgf/cm <sup>2</sup> )
Pilot circuit .....	3.9 MPa (40 kgf/cm <sup>2</sup> )

#### Hydraulic Cylinders

##### ZX17U-5

	Quantity	Bore	Rod diameter	Stroke
Boom (3-Pillar canopy)	1	60 mm	35 mm	406 mm
Arm	1	55 mm	30 mm	406 mm
Bucket	1	55 mm	30 mm	311 mm
Blade	1	65 mm	35 mm	94 mm
Boom swing	1	60 mm	30 mm	298 mm
Span	1	50 mm	30 mm	312 mm

##### ZX19U-5

	Quantity	Bore	Rod diameter	Stroke
Boom (3-Pillar canopy)	1	60 mm	35 mm	435 mm
Arm	1	60 mm	35 mm	406 mm
Bucket	1	55 mm	30 mm	311 mm
Blade	1	65 mm	35 mm	94 mm
Boom swing	1	60 mm	30 mm	298 mm
Span	1	50 mm	30 mm	312 mm

### UPPERSTRUCTURE

#### 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 .....	9.4 min <sup>-1</sup> (rpm)
Swing torque .....	1.7 kNm (173 kgfm)

### UNDERCARRIAGE

#### Tracks

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

#### Numbers of Rollers on Each Side

Lower rollers .....	3
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#### Travel Device

Each track driven by 2-speed axial piston motor. Parking brake is spring-set/hydraulic-released disc type.

Travel speeds .....	High : 0 to 4.2 km/h Low : 0 to 2.4 km/h
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Maximum traction force ... 11.4 kN (1 160 kgf)

Gradeability .....

47% (25 degree) continuous

### SOUND LEVEL

Sound level canopy according to ISO 6396 ..... LpA 76 dB(A)  
External sound level according to ISO 6395 and  
EU Directive 2000/14/EC ..... LwA 93 dB(A)

### SERVICE REFILL CAPACITIES

Fuel tank .....	20.0 L
Engine coolant .....	2.7 L
Engine oil .....	3.1 L
Travel device (each side) .....	0.25 L
Hydraulic system .....	26.0 L
Hydraulic oil tank .....	14.0 L

### WEIGHTS AND GROUND PRESSURE

#### Operating Weight and Ground Pressure

##### ZX17U-5

3-PILLAR CANOPY

Including 1.82 m boom and 0.044 m<sup>3</sup> bucket (ISO heaped).

Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm <sup>2</sup> )
Rubber shoe	230 mm	0.93 m	1 760 *	26.6 (0.27)

\* (Operating weight with 0.044 m<sup>3</sup> bucket, fully serviced, +80 kg operator ISO 6016).

##### ZX19U-5

3-PILLAR CANOPY

Including 1.82 m boom and 0.044 m<sup>3</sup> bucket (ISO heaped).

Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm <sup>2</sup> )
Rubber shoe	230 mm	1.13 m	1 860 *	28.3 (0.29)

\* (Operating weight with 0.044 m<sup>3</sup> bucket, fully serviced, +80 kg operator ISO 6016).

## BUCKET AND ARM DIGGING FORCE

### ZX17U-5

Arm length	0.93 m
Bucket digging force ISO	16.0 kN (1 630 kgf)
Bucket digging force SAE : PCSA	12.5 kN (1 270 kgf)
Arm crowd force ISO	8.6 kN (880 kgf)
Arm crowd force SAE : PCSA	7.9 kN (810 kgf)

### ZX19U-5

Arm length	1.13 m
Bucket digging force ISO	16.0 kN (1 630 kgf)
Bucket digging force SAE : PCSA	12.6 kN (1 280 kgf)
Arm crowd force ISO	9.2 kN (940 kgf)
Arm crowd force SAE : PCSA	8.5 kN (870 kgf)

## BACKHOE ATTACHMENTS

### ZX17U-5

Boom and arms are of welded, box-section design. 1.82 m boom, 0.93 m arm is available.

#### Buckets

Capacity	Width		No. of teeth	Weight	Recommendation
	Without side cutters	With side cutters			Arm 0.93 m
0.020 m <sup>3</sup>	250 mm	300 mm	3	32.0 kg	○
0.035 m <sup>3</sup>	300 mm	350 mm	3	34.6 kg	○
0.040 m <sup>3</sup>	350 mm	400 mm	3	36.6 kg	○
0.044 m <sup>3</sup>	400 mm	450 mm	3	38.6 kg	○
0.050 m <sup>3</sup>	450 mm	500 mm	3	40.9 kg	□

○ Suitable for materials with density of 2 000 kg/m<sup>3</sup> or less

□ Suitable for materials with density of 1 600 kg/m<sup>3</sup> or less

### ZX19U-5

Boom and arms are of welded, box-section design. 1.82 m boom, 1.13 m arm is available.

#### Buckets

Capacity	Width		No. of teeth	Weight	Recommendation
	Without side cutters	With side cutters			Arm 1.13 m
0.020 m <sup>3</sup>	250 mm	300 mm	3	32.0 kg	○
0.035 m <sup>3</sup>	300 mm	350 mm	3	34.6 kg	○
0.040 m <sup>3</sup>	350 mm	400 mm	3	36.6 kg	○
0.044 m <sup>3</sup>	400 mm	450 mm	3	38.6 kg	□
0.050 m <sup>3</sup>	450 mm	500 mm	3	40.9 kg	△

○ Suitable for materials with density of 2 000 kg/m<sup>3</sup> or less

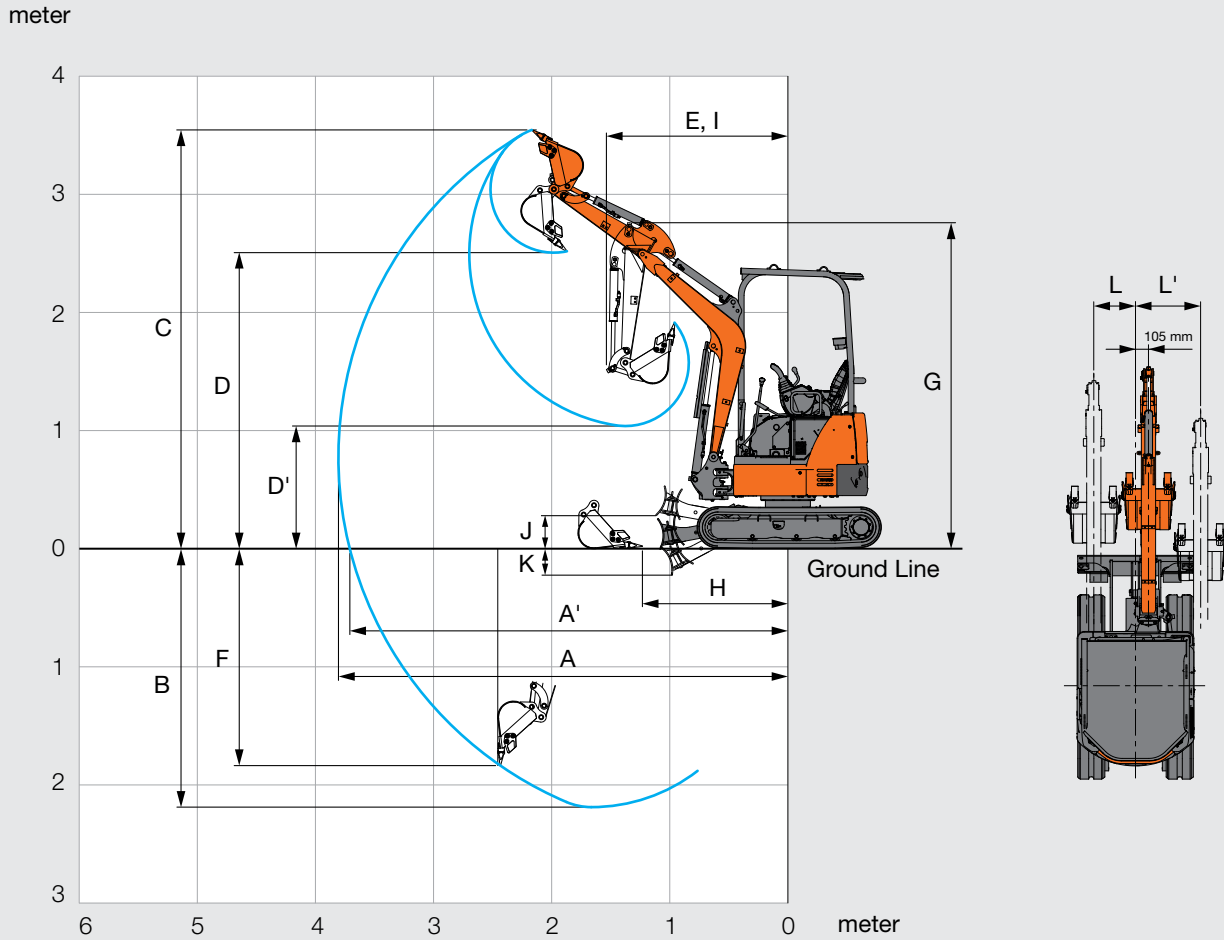
□ Suitable for materials with density of 1 600 kg/m<sup>3</sup> or less

△ Suitable for materials with density of 1 100 kg/m<sup>3</sup> or less

# SPECIFICATIONS

## ZX17U-5

### WORKING RANGES

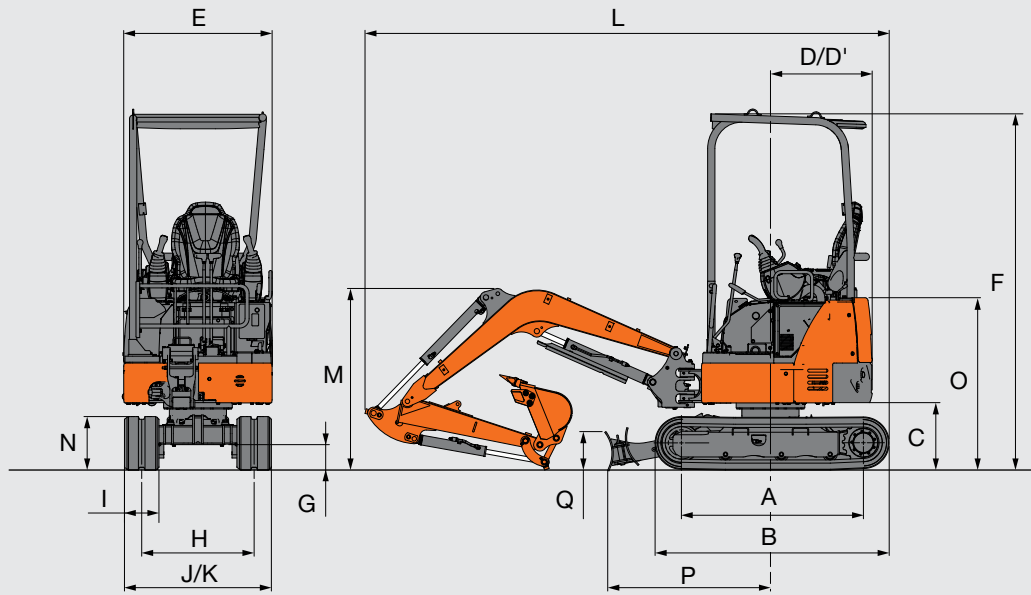


This illustration shows with 0.93 m arm, 0.044 m<sup>3</sup> bucket and 230 mm rubber shoes.

Unit: mm

	ZAXIS 17U
	0.93 m arm
	3-Pillar Canopy
A Max. digging reach	3 810
A' Max. digging reach (on ground)	3 720
B Max. digging depth	2 190
C Max. cutting height	3 540
D Max. dumping height	2 510
D' Min. dumping height	1 040
E Min. swing radius	1 530
F Max. vertical wall digging depth	1 840
G Front height at Min. swing radius	2 770
H Min. level crowding distance	1 230
I Working radius at Min. swing radius (Max. boom-swing angle)	1 060
J Blade bottom highest position above ground	285
K Blade bottom lowest position above ground	225
L/L' Offset distance	355 / 555
Max. boom-swing angle (deg.)	70 / 50

## DIMENSIONS



This illustration shows with 0.93 m arm, 0.044 m<sup>3</sup> bucket and 230 mm rubber shoes.

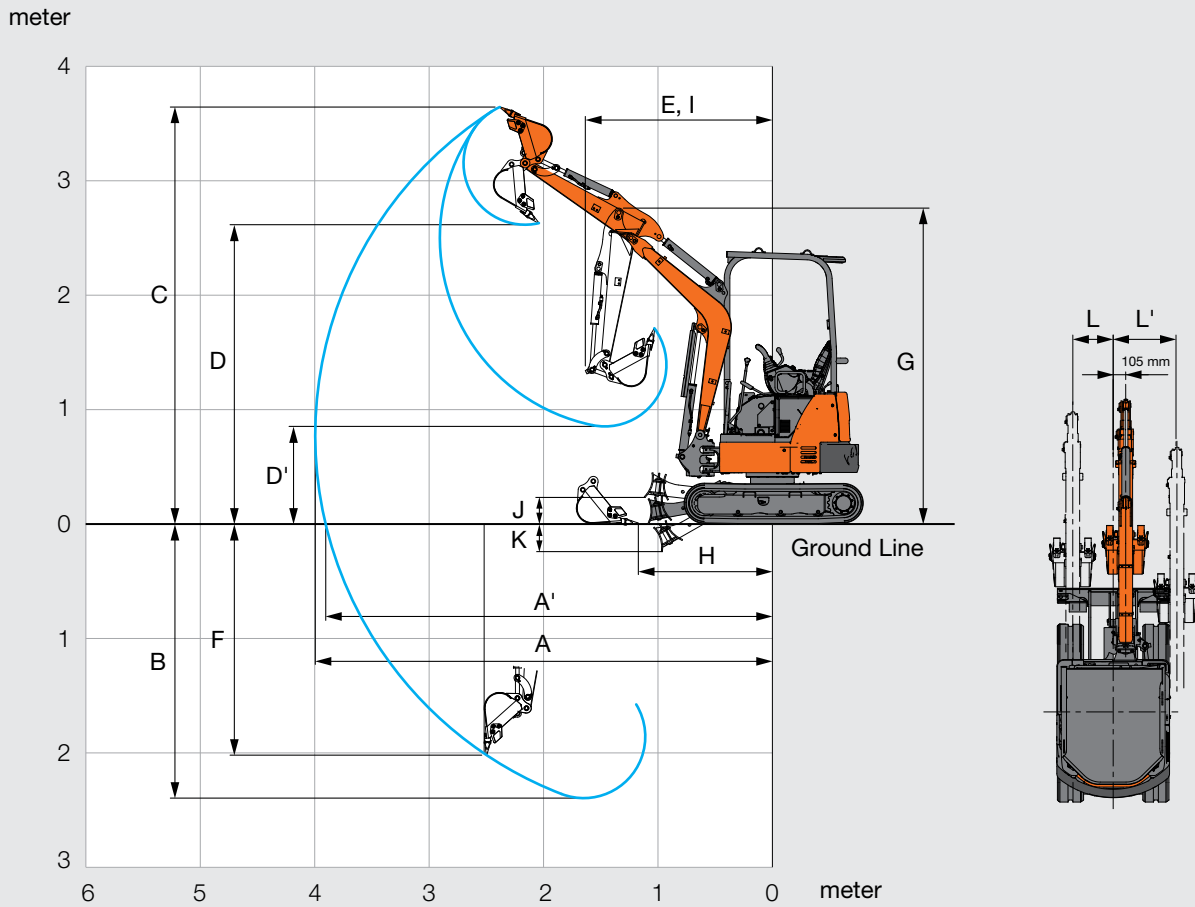
Unit: mm

	ZAXIS 17U	
	3-Pillar Canopy	
A Distance between tumblers	1 210	
B Undercarriage length	1 570	
C Counterweight clearance	450	
D Rear-end swing radius	680	
D' Rear-end length	680	
E Overall width of upperstructure	990	
F Overall height of cab	2 380	
G Min. ground clearance	165	
H Track gauge (Retract / Extend)	750 / 1 050	
I Track shoe width	230	
J Undercarriage (Blade) width (Retract / Extend)	980 / 1 280	
K Overall width (Retract / Extend)	990 / 1 280	
L Overall length	3 500	
M Overall height of boom	1 210	
N Track height	360	
O Engine cover-height	1 150	
P Horizontal distance to blade	1 090	
Q Blade height	220	

# SPECIFICATIONS

## ZX19U-5

### WORKING RANGES

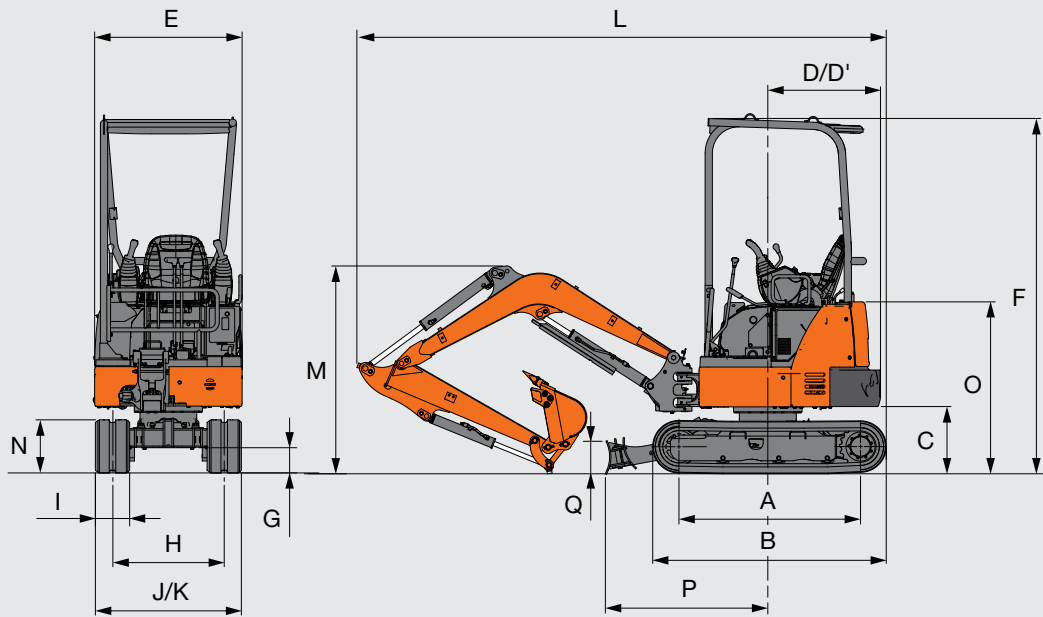


This illustration shows with 1.13 m arm, 0.044 m<sup>3</sup> bucket and 230 mm rubber shoes.

Unit: mm

	ZAXIS 19U
	1.13 m arm
	3-Pillar Canopy
A Max. digging reach	3 990
A' Max. digging reach (on ground)	3 900
B Max. digging depth	2 390
C Max. cutting height	3 640
D Max. dumping height	2 610
D' Min. dumping height	850
E Min. swing radius	1 620
F Max. vertical wall digging depth	2 020
G Front height at Min. swing radius	2 770
H Min. level crowding distance	1 170
I Working radius at Min. swing radius (Max. boom-swing angle)	1 060
J Blade bottom highest position above ground	285
K Blade bottom lowest position above ground	225
L/L' Offset distance	355 / 555
Max. boom-swing angle (deg.)	70 / 50

## DIMENSIONS



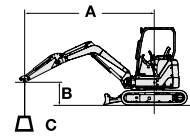
This illustration shows with 1.13 m arm, 0.044 m<sup>3</sup> bucket and 230 mm rubber shoes.

Unit: mm

	ZAXIS 19U	
	3-Pillar Canopy	
A Distance between tumblers	1 210	
B Undercarriage length	1 570	
C Counterweight clearance	450	
D Rear-end swing radius	755	
D' Rear-end length	755	
E Overall width of upperstructure	990	
F Overall height of cab	2 380	
G Min. ground clearance	165	
H Track gauge (Retract / Extend)	750 / 1 050	
I Track shoe width	230	
J Undercarriage (Blade) width (Retract / Extend)	980 / 1 280	
K Overall width (Retract / Extend)	990 / 1 280	
L Overall length	3 540	
M Overall height of boom	1 390	
N Track height	360	
O Engine cover-height	1 150	
P Horizontal distance to blade	1 090	
Q Blade height	220	

# 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.

## ZAXIS 17U 3-Pillar Canopy Version, Blade above Ground

Rating over-front Rating over-side or 360 degrees Unit: 1 000 kg

Conditions	Load point height m	Load radius						At max. reach		
		1.0 m		2.0 m		3.0 m				meter
Boom 1.82 m Arm 0.93 m Counterweight 120 kg Rubber shoe 230 mm	2							0.26	0.24	2.98
	1			0.45	0.42	0.25	0.23	0.22	0.20	3.27
	0 (Ground)			0.42	0.39	0.24	0.22	0.22	0.21	3.15
	-1	*1.12	*1.12	0.42	0.39			0.29	0.28	2.58

## ZAXIS 17U 3-Pillar Canopy Version, Blade on Ground

Rating over-front Rating over-side or 360 degrees Unit: 1 000 kg

Conditions	Load point height m	Load radius						At max. reach		
		1.0 m		2.0 m		3.0 m				meter
Boom 1.82 m Arm 0.93 m Counterweight 120 kg Rubber shoe 230 mm	2							*0.40	0.24	2.98
	1			*0.70	0.42	*0.44	0.23	*0.41	0.20	3.27
	0 (Ground)			*0.81	0.39	*0.46	0.22	*0.42	0.21	3.15
	-1	*1.12	*1.12	*0.63	0.39			*0.42	0.28	2.58

## ZAXIS 19U 3-Pillar Canopy Version, Blade above Ground

Rating over-front Rating over-side or 360 degrees Unit: 1 000 kg

Conditions	Load point height m	Load radius						At max. reach		
		1.0 m		2.0 m		3.0 m				meter
Boom 1.82 m Arm 1.13 m Counterweight 240 kg Rubber shoe 230 mm	2					0.30	0.28	0.27	0.26	3.18
	1			0.53	0.49	0.29	0.27	0.24	0.22	3.44
	0 (Ground)			0.49	0.46	0.28	0.26	0.24	0.23	3.34
	-1	*0.94	*0.94	0.49	0.46			0.30	0.29	2.81

## ZAXIS 19U 3-Pillar Canopy Version, Blade on Ground

Rating over-front Rating over-side or 360 degrees Unit: 1 000 kg

Conditions	Load point height m	Load radius						At max. reach		
		1.0 m		2.0 m		3.0 m				meter
Boom 1.82 m Arm 1.13 m Counterweight 240 kg Rubber shoe 230 mm	2					*0.36	0.28	*0.36	0.26	3.18
	1			*0.64	0.49	*0.42	0.27	*0.38	0.22	3.44
	0 (Ground)			*0.81	0.46	*0.46	0.26	*0.39	0.23	3.34
	-1	*0.94	*0.94	*0.69	0.46			*0.41	0.29	2.81

# EQUIPMENT

● ..... Standard equipment    ○ ..... Optional equipment

## ENGINE

Cartridge-type engine oil filter	●
Fuel main filter	●
Radiator reserve tank	●
Water-separator for engine fuel	●

## HYDRAULIC SYSTEM

Full-flow filter	●
Hydraulic pilot type control levers	●
Pilot control shut-off lever with neutral engine start system	●
Pilot filter	●
Suction filter	●
Swing parking brake	●
Travel parking brake	●
Two-speed travel system	●
Valve for extra piping	●

## 3-PILLAR CANOPY

Anti-slip plate	●
Arm rests	●
Electric horn	●
Floor mat	●
ROPS/OPG canopy	●
Seat belt	●
Spare power supply	●
Suspension seat	●

## UPPER STRUCTURE

Counterweight 120 kg: ZX17U-5	●
Counterweight 240 kg: ZX19U-5	●

## UNDERCARRIAGE

Retractable undercarriage	●
Rubber shoe 230 mm	●

## FRONT ATTACHMENTS

Arm 0.93 m: ZX17U-5	●
Arm 1.13 m: ZX19U-5	●
Boom 1.82 m	●
Extra piping	●
HN bushing	●

## MISCELLANEOUS

Theft deterrent system*	○
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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.

# MEMO





