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: 1 880 kg
Backhoe Bucket ISO Heaped: 0.044 m³



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.





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.





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.

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

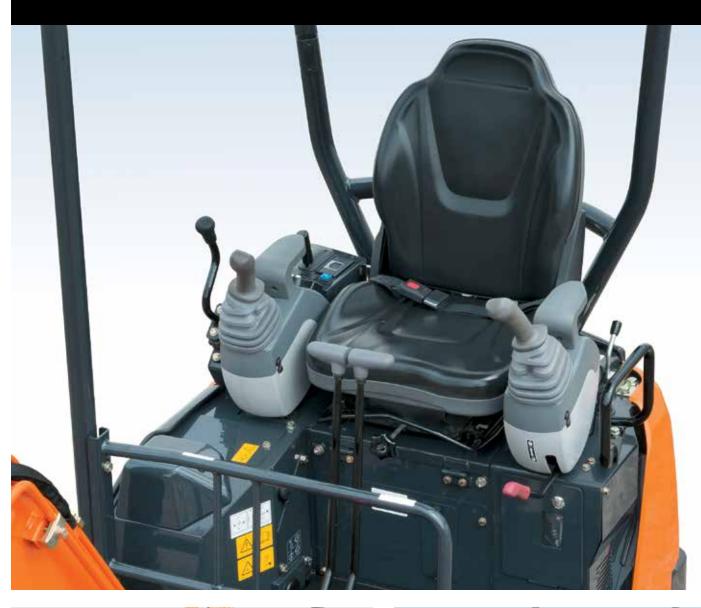
- Hose protection
- Boom cylinder guard

^{*} Based on the measurement with the Hitachi test rule



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







Comfort

Working long shifts in 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

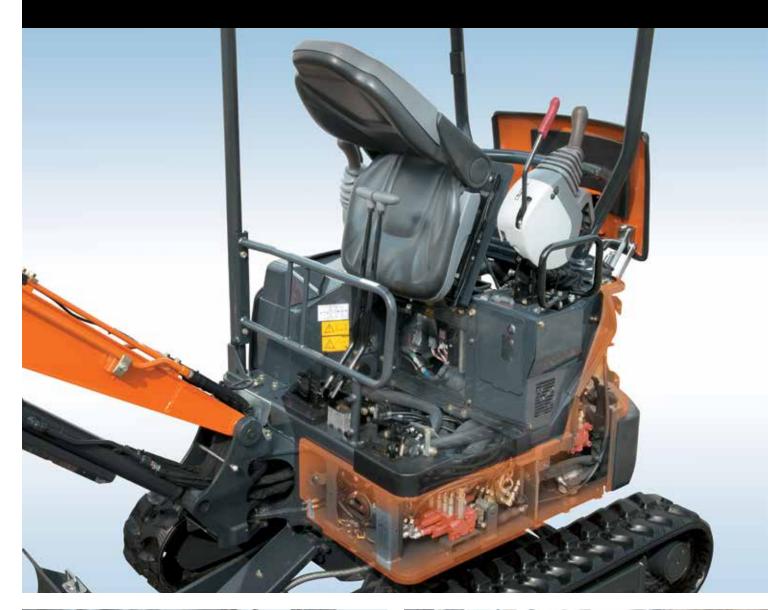
- Enhanced visibility
- Easily accessible information
- Expansive leg room

- 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

ENGINE

Model 3TNV70

Type Water-cooled, 4-cycle, swirl combustion chamber

injection type diesel engine

No. of cylinders 3

Rated power

Piston displacement 0.854 L

HYDRAULIC SYSTEM

Hydraulic Pumps

Main pumps 2 variable displacement axial piston pumps

 $\begin{array}{cc} & \text{1 gear pump} \\ \text{Maximum oil flow } & \dots & \text{2 x 19.2 L/min} \end{array}$

1 x 10.8 L/min
Pilot pump 1 gear pump
Maximum oil flow 6.5 L/min

Hydraulic Motors

Swing 1 gear pump

Relief Valve Settings

 Implement circuit
 20.6 MPa (210 kgf/cm²)

 Swing circuit
 13.7 MPa (140 kgf/cm²)

 Travel circuit
 20.6 MPa (210 kgf/cm²)

 Pilot circuit
 3.9 MPa (40 kgf/cm²)

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⁻¹ (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

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

Maximum traction force ... 11.4 kN (1 160 kgf)

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	
Travel device (each side)	
Hydraulic system	
Hydraulic oil tank	

WEIGHTS AND GROUND PRESSURE

Operating Weight and Ground Pressure

ZX17U-5

3-PILLAR CANOPY

Including 1.82 m boom and 0.044 m³ bucket (ISO heaped).

Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm²)
Rubber shoe	230 mm	0.93 m	1 760 *	26.6 (0.27)

^{* (}Operating weight with 0.044 m³ bucket, fully serviced, +80 kg operator ISO 6016).

ZX19U-5

3-PILLAR CANOPY

Including 1.82 m boom and 0.044 m³ bucket (ISO heaped).

•				
Shoe type	Shoe width	Arm length	kg	kPa(kgf/cm²)
Rubber shoe	230 mm	1.13 m	1 880 *	28.3 (0.29)

^{* (}Operating weight with 0.044 m³ 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	Wi	dth No. of			Recommendation
ISO heaped	Without side cutters	With side cutters	teeth	Weight	Arm 0.93 m
0.020 m ³	250 mm	300 mm	3	32.0 kg	0
0.035 m ³	300 mm	350 mm	3	34.6 kg	0
0.040 m ³	350 mm	400 mm	3	36.6 kg	0
0.044 m ³	400 mm	450 mm	3	38.6 kg	0
0.050 m ³	450 mm	500 mm	3	40.9 kg	

 $[\]bigcirc$ Suitable for materials with density of 2 000 kg/m $^{\!3}$ 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	Wi	dth No. of			Recommendation
ISO heaped	Without side cutters	With side cutters	teeth	Weight	Arm 1.13 m
0.020 m ³	250 mm	300 mm	3	32.0 kg	0
0.035 m ³	300 mm	350 mm	3	34.6 kg	0
0.040 m ³	350 mm	400 mm	3	36.6 kg	0
0.044 m ³	400 mm	450 mm	3	38.6 kg	
0.050 m ³	450 mm	500 mm	3	40.9 kg	Δ

O Suitable for materials with density of 2 000 kg/m³ or less

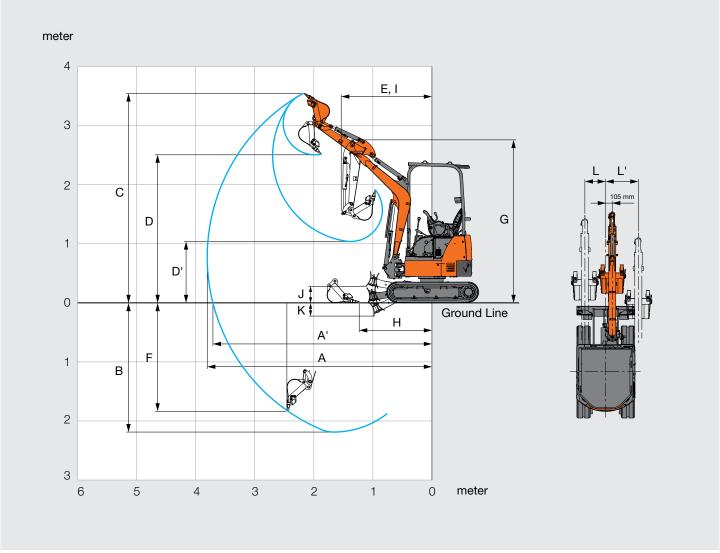
[☐] Suitable for materials with density of 1 600 kg/m³ or less

 $[\]hfill \square$ Suitable for materials with density of 1 600 kg/m $^{\!3}$ or less

 $[\]bigtriangleup$ Suitable for materials with density of 1 100 kg/m³ or less

SPECIFICATIONS ZX17U-5

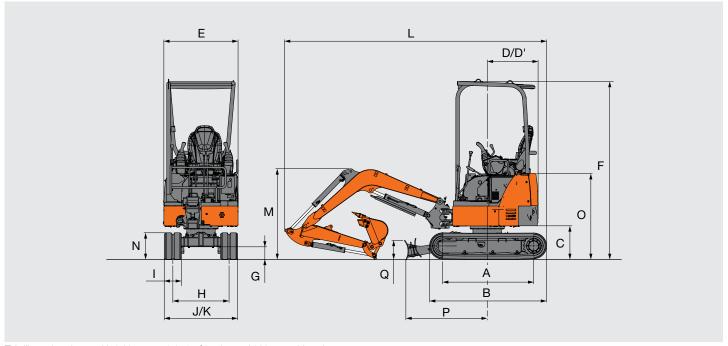
WORKING RANGES



This illustration shows with 0.93 m arm, 0.044 m³ bucket and 230 mm rubber shoes.

	Offic. 11111
	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

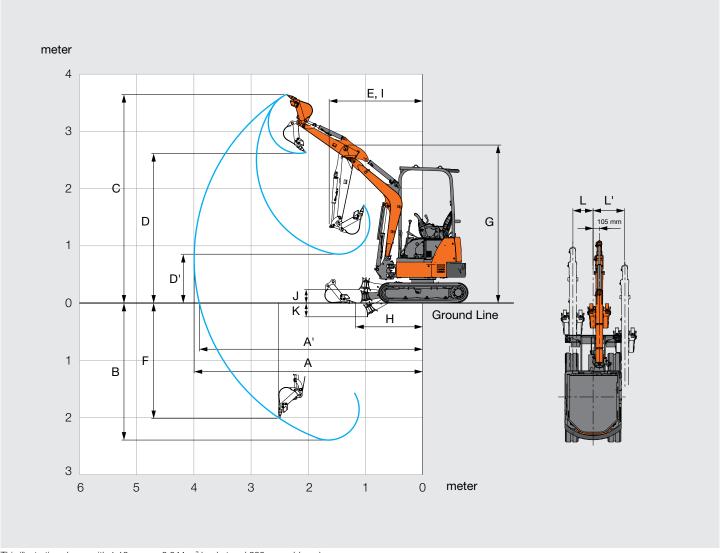


This illustration shows with 0.93 m arm, 0.044 m³ bucket and 230 mm rubber shoes.

	Office Hill
	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

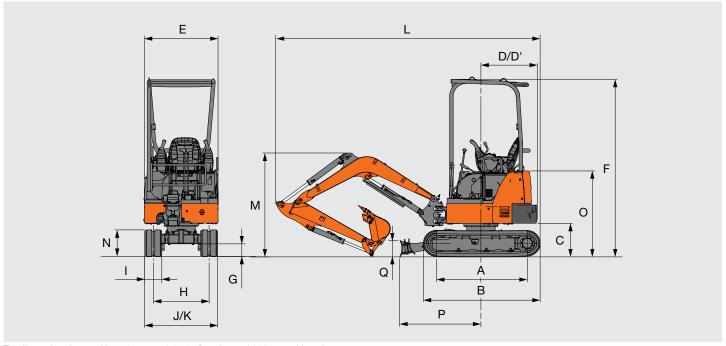
WORKING RANGES



This illustration shows with 1.13 m arm, 0.044 m³ bucket and 230 mm rubber shoes.

	Critic Tritin
	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 m³ bucket and 230 mm rubber shoes.

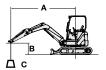
	Offic. Thir
	ZAXIS 19U
	3-Pillar Canopy
A Distance between tumblers	1 210
B Undercarriage length	1 570
C Counterweight clearance	450
D Rear-end swing radius	755
D' Rear-end length	755
E Overall width of upperstructure	990
F Overall height of cab	2 380
G Min. ground clearance	165
H Track gauge (Retract / 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

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.

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



A: Load radius

B: Load point height C: Lifting capacity

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

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

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

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

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

	Load	Load radius							At max. reach		
Conditions	point	1.0 m		2.0 m		3.0 m		At max. reach			
	height m	ů	-	ů	-	ů	-	ů	-	meter	
Boom 1.82 m	2					*0.36	0.28	*0.36	0.26	3.18	
Arm 1.13 m Counterweight	1			*0.64	0.49	*0.42	0.27	*0.38	0.22	3.44	
240 kg Rubber shoe 230 mm	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

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	•

- Odoporiolori odat
UPPER STRUCTUR
Counterweight 120 kg: ZX17U-5
Counterweight 240 kg: ZX19U-5
UNDERCARRIAGE
Retractable undercarriage

Rubber shoe 230 mm

FRONT ATTACHMENT	S
Arm 0.93 m: ZX17U-5	•
Arm 1.13 m: ZX19U-5	•
Boom 1.82 m	•
Extra piping	•
HN bushing	•

...... Standard equipment O

...... Optional equipment

MISCELLANEOUS	
Theft deterrent system*	0

MEMO







- Hitachi Environmental Vision 2025 -

The Hitachi Group released the Environmental Vision 2025 to curb annual carbon dioxide emissions. The Group is committed to global production while reducing environmental impact in life cycles of all products, and realizing a sustainable society by tackling three goals — prevention of global warming, recycling of resources, and enhancement of ecosystem.

Reducing Environmental Impact by New ZAXIS

Hitachi makes a green way to cut carbon emissions for global warming prevention according to LCA*. New ZAXIS utilizes lots of technological advances, including the new ECO mode, and Isochronous Control. Hitachi has long been committed to recycling of components, such as aluminum parts in radiators and oil cooler. Resin parts are marked for recycling. *Life Cycle Assessment – ISO 14040



Prior to operating this machine, including 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, customer installed and modified parts, optional parts and all standard equipment with some differences in color and features. Before use, read and understand the Operator's Manual for proper operation.

Hitachi Construction Machinery www.hcme.com

KS-EN294EU