KUBOTA ZERO-TAIL SWING MINI EXCAVATORS

U45-3α
U50-3α

Kubota

Introducing the most advanced Mini Excavator in its class. The U45-3α and the U50-3α. Pushing the limits of technology and design.

Travelling system

The U45-3α and U50-3α's feasibility on rough terrain have greatly increased due to its reinforced travelling force. They are also equipped with travelling lock levers that activate whenever the pilot control safety lever is not engaged. This system prevents any unexpected machine movement and is ideal for when operators enter or exit the cabin.

Load sensing hydraulic system

Kubota's load sensing hydraulic system guarantees smoother handling, regardless of the load size. It works by allowing hydraulic oil to flow according to the amount of lever stroke. As a result, it delivers reduced fuel consumption and greater overall operating performance.

Protected bucket cylinder hoses

Now, hoses are routed within the arm for greater safety. This design guarantees improved operator visibility, increased service life and lower repair costs.

Swivel negative brake

The swivel negative brake automatically locks the swivel function in its current position when the engine is stopped or the pilot control safety lever is raised. Hence, the swivel transport lock pin is no longer required.

Straight travel

The Hydraulic Matching System ensures straight travel, even during simultaneous operation, for safer loading/off-loading.

Four simultaneous operations

When simultaneous operation of the boom, arm, bucket and swing are required, the pump distributes the adequate oil flow to each actuator according to the amount lever stroke. Now, high-performance lifting, loading, digging and dozing are assured without a loss of speed or power.

Two piece hose design

The innovative two piece hose design on the dozer and boom cylinders of the U45-3α and U50-3α reduce hose replacement time by 60 % compared to non-joint types. What's more, this design virtually eliminates the need to enter the machine for maintenance.

Air conditioning (optional)

The cab's new optional deluxe air conditioning/heater can increase cooling, heating and air ventilation for greater climate control. Plus, outside air can be introduced with one touch of the external air vent.

ROPS/FOPS Cabin (Level1)

For maximum operator safety, the cabin provides a Roll Over Protection Structure (ROPS) and a Falling Object Protection Structure (FOPS).

Control levers

Short stroke levers and ergonomically designed wrist rests provide greater and more precise control, as well as smoother operation that helps minimise operator fatigue.

Zero-tail swing

Kubota's zero-tail swing is a pivotal advancement in mini excavators. Unmatched power, worry-free 360° swivel and excellent stability mean there are no limits to what you can accomplish, especially in tight spaces. In fact, the excavators' smooth control, improved efficiency and superior value make them ideally suited for jobs in congested urban areas. Plus, enhanced operator comfort and environmental friendliness not only complete the package, but also make the U45-3*α* and U50-3*α* your ultimate mini excavator choice.

Innovative 360˚ performance and enhanced operator comfort.

Proportional flow auxiliary switch

Repositioned from the floor, a convenient thumb-operated switch enables easy operation of breaker and other auxiliary equipment, such as an auger or a tilt bucket.

2-speed switch

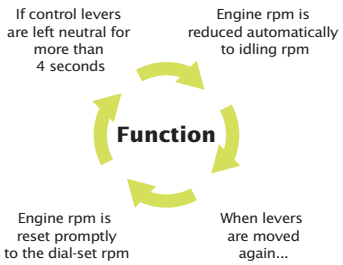
Conveniently mounted on the dozer lever, the repositioned 2-Speed Travel Switch allows advanced user-friendly travel speed changes, increased floor space, improved operation, as well as greater control and comfort.

Simple forefinger operation

For some special applications that require continuous oil flow, the on/off button controlled by the forefinger reduces operator fatigue.

Auto Idling System (AI)

When high engine rpm is not needed, or when control levers are left in neutral for longer than 4 seconds, the idling system automatically reduces the engine to idling rpm. When the levers are moved again, engine rpm is promptly reset to the dial-set rpm. This innovative feature not only reduces noise and exhaust emissions, but saves on fuel, energy and running costs as well.



DIGITAL PANEL

Informative, interactive and functional. Kubota's Intelligent Control System keeps you in tune of the U45-3α and U50-3α's vital signs. It accurately displays easy to understand diagnostics of current working conditions and warning indicators for engine rpm and hour meter, as well as for fuel, temperature and oil levels. When filling-up with fuel, our panel also informs the operator that the tank is nearly full, plus alerts the operator to when routine maintenance is due. Overall, the panel reduces excavator downtime and repair fees for a decrease in total operating costs.

Language selection display

Information when service time comes

Low fuel display

Engine inspection

Primary points like the engine and air cleaner can be inspected and maintained quickly and easily via the rear engine cover. Fuel filter and water separator are independently installed and both are located inside engine bonnet for the easier inspection. An engine inspection window is also located behind the seat for easier access to the engine's injection nozzles.

Boom cylinder protector

The new, thicker steel plated V-shaped boom cylinder protector safeguards against damage from attachments, rocks or loading.

Control valve inspection

A quick and easy inspection of the control valve is possible simply by opening the latch on the bonnet located to the right of the cabin. When more detailed maintenance or repairs are required, the remaining panels on the swing frame can be easily removed using standard tools.

Third line hydraulic return

The Third Line Hydraulic Return enables greater oil flow efficiency by reducing back pressure when working with hydraulically actuated attachments, such as a hydraulic hammer.

Kubota engine

Kubota's unique new E-TVCS (Three Vortex Combustion System) enables high-energy output, low vibration and low fuel consumption, while minimising exhaust emissions.

Standard Equipment

Engine/Fuel System

- Double element air cleaner
- Electric fuel pump
- Auto idling system

Undercarriage

- 400 mm rubber track
- 1 x upper track roller
- 4 x outer flange type track roller
- 2 speed travel switch on dozer lever

Hydraulic System

- Pressure accumulator
- Hydraulic pressure checking ports
- Straight travel circuit
- Third line hydraulic return
- Auxiliary switch on right control lever

Safety System

- Engine start safety system on the left console
- Travel lock system on the left console
- Swivel lock system
- Boom check valve
- Kubota original anti-theft system

Working Equipment

- Auxiliary hydraulic circuit piping to the arm end
- 2 working lights on cabin and 1 light on the boom

Cabin

- ROPS (Roll-Over Protective Structure, ISO3471)
- FOPS (Falling Objects Protective Structure) Level 1
- Weight adjustable full suspension seat
- Seatbelt
- Hydraulic pilot control levers with wrist rests
- Travel levers with foot pedals
- Cabin heater for defrosting & demisting
- Emergency exit hammer
- Front window power-assisted with 2 gas dampers
- 12 V power source for radio-stereo
- 2 speakers and radio antenna
- Location for radio

Optional Equipment

Undercarriage

- 400 mm steel track (+ 70 kg)

Safety System

- Overload warning buzzer
- Anti-fall valve unit (boom, arm, dozer)

Cabin

- Air conditioning

Others

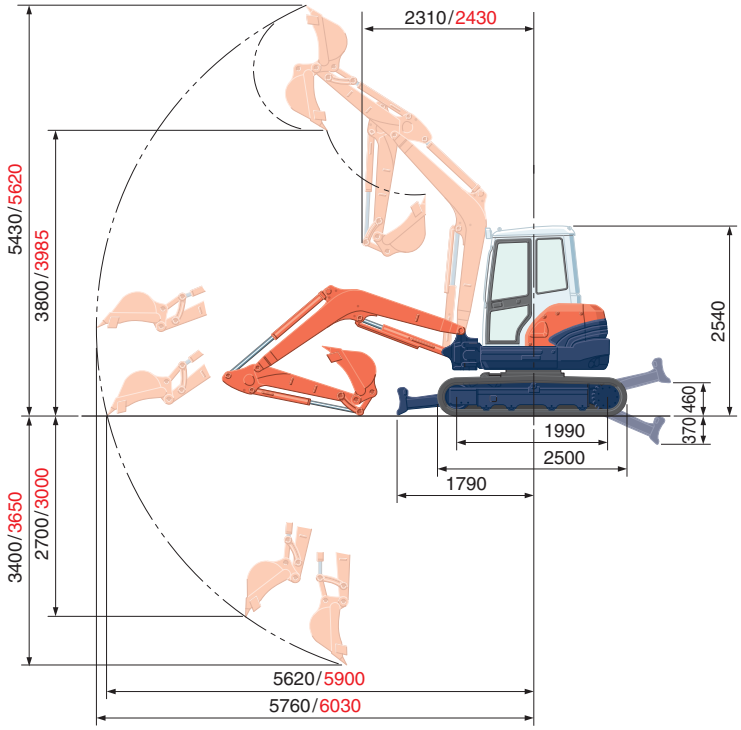
- Special paint upon request

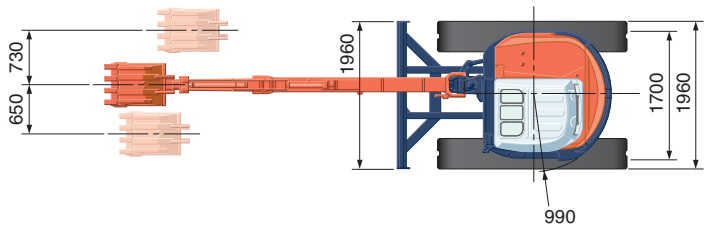
SPECIFICATIONS

*Rubber shoe type

				U45-3α	U50-3α
Model					
Machine weight	Cabin		kg	4500	4890
Bucket capacity, std. SAE/CECE			m^3	0.14/0.12	
Bucket width	With side teeth		mm	600	
	Without side teeth		mm	550	
Engine	Model			V2203-M-EBH-2-N	
	Type			Water-cooled, diesel engine E-TVCS (Economical, ecological type)	
	Output ISO9249		PS/rpm	40/2250	
			kW/rpm	29.4/2250	
	Number of cylinders			4	
	Bore × Stroke		mm	87 × 92.4	
	Displacement		cc	2197	
Overall length			mm	5340	5385
Overall height	Cabin		mm	2540	
Swivelling speed			rpm	9.1	
Rubber shoe width			mm	400	
Tumbler distance			mm	1990	
Dozer size (width × height)			mm	1960 × 390	
Hydraulic pumps	P1			Variable displacement pump	
	Flow rate		ℓ/min	121.5	
	Hydraulic pressure		MPa (kgf/cm^2)	23.5 (240)	
Max. digging force	Arm		kN (kgf)	23.0 (2350)	20.2 (2060)
	Bucket		kN (kgf)	32.9 (3350)	
Boom swing angle (left/right)			deg	80/50	
Auxiliary circuit	Flow rate		ℓ/min	73	
	Hydraulic pressure		MPa (kgf/cm^2)	23.5 (240)	
Hydraulic reservoir			ℓ	44	
Fuel tank capacity			ℓ	70	
Max. travelling speed	Low		km/h	2.7	2.3
	High		km/h	4.8	4.6
Ground contact pressure	Cabin		kPa (kgf/cm^2)	25.8 (0.26)	27.7 (0.28)
Ground clearance			mm	320	

WORKING RANGE





Unit: mm
U45-3α
U50-3α

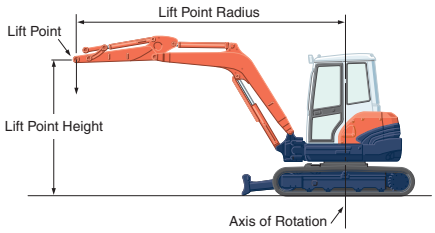
LIFTING CAPACITY

U45-3α kN (ton)

Lift Point Height	Lifting point radius (3m)			Lifting point radius (4m)		
	Over-front		Over-side	Over-front		Over-side
	Blade Down	Blade UP		Blade Down	Blade UP	
3m	-	-	-	9.3 (0.95)	8.5 (0.87)	7.5 (0.76)
2m	14.0 (1.42)	13.0 (1.33)	11.2 (1.14)	10.6 (1.08)	8.3 (0.84)	7.2 (0.74)
1m	18.3 (1.87)	12.1 (1.23)	10.3 (1.05)	12.2 (1.24)	7.9 (0.81)	6.9 (0.70)
0m	19.6 (2.00)	11.7 (1.19)	9.9 (1.01)	13.0 (1.33)	7.6 (0.78)	6.6 (0.68)

U50-3α kN (ton)

Lift Point Height	Lifting point radius (3m)			Lifting point radius (4m)		
	Over-front		Over-side	Over-front		Over-side
	Blade Down	Blade UP		Blade Down	Blade UP	
3m	-	-	-	8.2 (0.84)	8.2 (0.84)	8.2 (0.84)
2m	12.1 (1.24)	12.1 (1.24)	12.1 (1.24)	9.6 (0.98)	9.6 (0.98)	9.1 (0.92)
1m	16.8 (1.72)	14.1 (1.44)	13.0 (1.32)	11.4 (1.16)	9.2 (0.94)	8.6 (0.88)
0m	19.0 (1.94)	13.5 (1.37)	12.4 (1.26)	12.5 (1.28)	8.8 (0.90)	8.3 (0.85)



Please note:
* The lifting capacities are based on ISO 10567 and do not exceed 75% of the static tilt load of the machine or 87% of the hydraulic lifting capacity of the machine.
* The excavator bucket, hook, sling and other lifting accessories are not included on this table.

* Working ranges are with Kubota standard bucket, without quick coupler.
* Specifications are subject to change without notice for purpose of improvement.

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