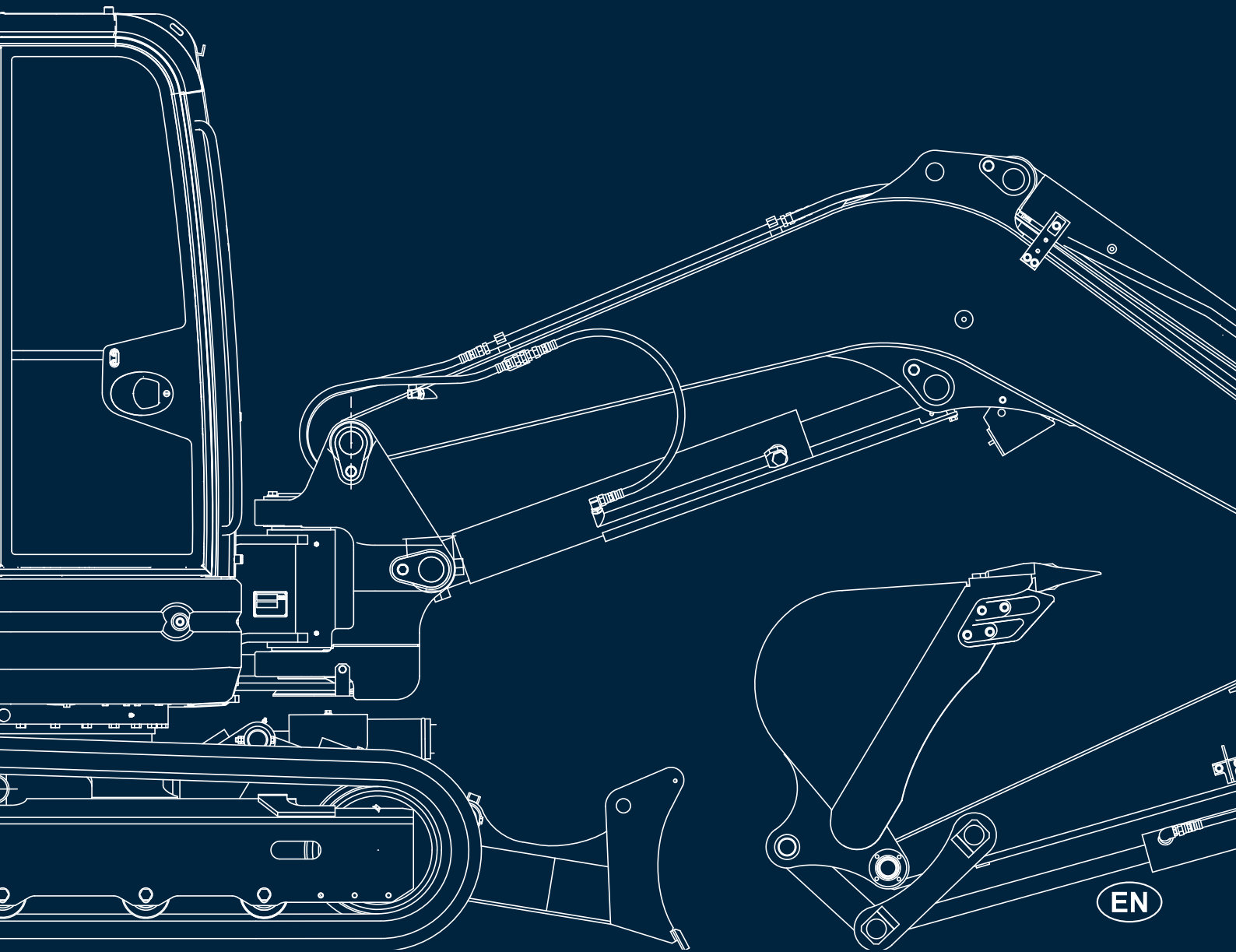


# MINI EXCAVATORS

## 2.7 / 8.5 TONS

HD27V5  
HD33V5  
HD37V5  
HD50V5  
HD60V5  
HD85V5



## UNIFIED DESIGN

# UNIFICATION OF SERIES HDV5 MODELS

Enhanced stability, stage V engines, optional auxiliary lines.

The new HDV5 series features first class operation with very high digging performance.

Maximum reliability with top quality components. Improved maintenance with optimised layout of components.

In addition to the first auxiliary line supplied as standard, two additional auxiliary lines can be supplied as optionals (the second with proportional control).

The new X layout undercarriage imparts greater rigidity and stability to the machine.



## Unified design for series V5 models

- Interchangeability and uniformity of replacement parts
- Components lay-out unification
- Same cab for all HDV5 models, from HD27V5 to HD85V5
- Well-balanced design for advanced operation and high stability

## DEVELOPMENT/CONCEPT

# OBJECTIVE

**offer better performance  
with a simple structure**

- Enhanced operator safety
- ROPS/FOPS conformity
- Controls lock system
- Comfortable space in the cab
- Spacious and comfortable operator position
- Simple, stable and powerful operations
- Well balanced design to ensure high performance and stability
- Lower maintenance costs
- Simplified design for longer lifetime
- Easier maintenance
- Reduced fuel consumption

## RECYCLED MATERIALS



All construction materials, sheet steel, cast iron and plastic, are 97% recyclable.

## Safer, more comfortable operator position

New canopy design to improve FOPS performance and assist water run-off.



The two-position sunshade is available as an optional.



## ENHANCED OPERATOR SAFETY

### Safe boarding and alighting

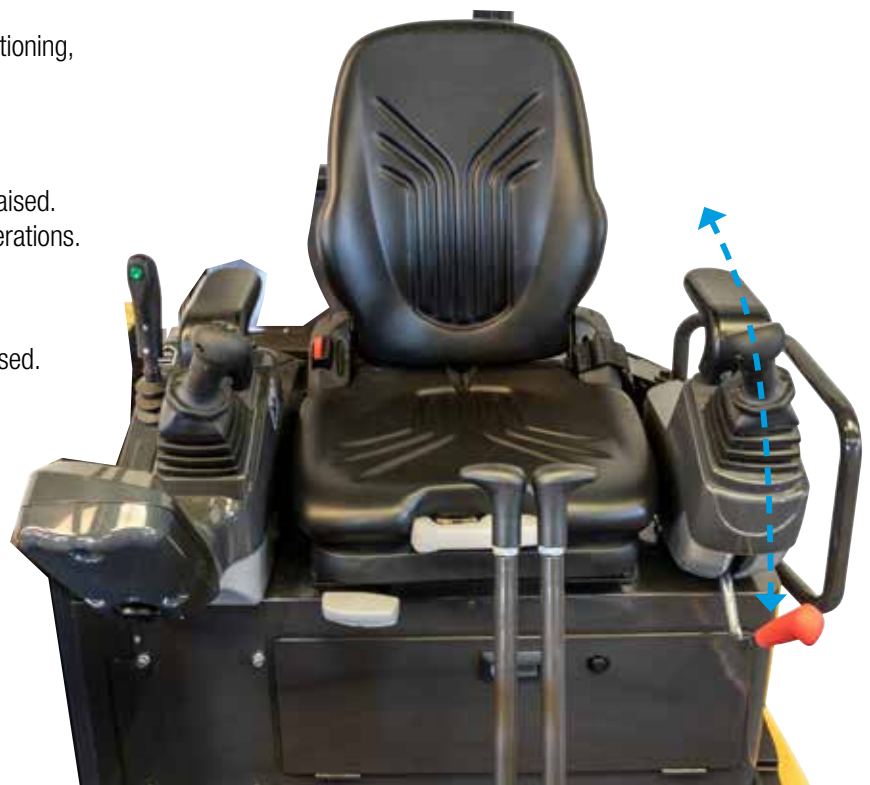
When the lever is raised and the locking system is functioning, all operations are inhibited.

### Engine start in safe conditions

The engine can be started only when the lock lever is raised. The starting system removes the risk of inadvertent operations.

### Safety with stationary machine

Auto-parking brake is applied when the lock lever is raised.



STOP BUTTON AND  
INDICATOR LIGHT FOR  
ALL MODELS (EXCEPT  
HD27V5).



## CAB AND INSTRUMENTS

Same cab from HD27V5 to HD85V5  
with ROPS tested to 8 tons

New canopy design, improved FOPS performance, assisted water run-off.

Shorter grab handle to minimise the risk of breakage due to impact with obstacles.

Improved visibility and rearview mirrors supplied as standard.



HOLDER FOR LOWER WINDOW



IMPROVED VISIBILITY WITH REARVIEW  
MIRRORS SUPPLIED AS STANDARD



MINI EXCAVATORS 2.7 / 8.5 TONS

Spring mounted bucket seat  
Seat with optional fabric upholstery

**+20%**  
**LEG ROOM**

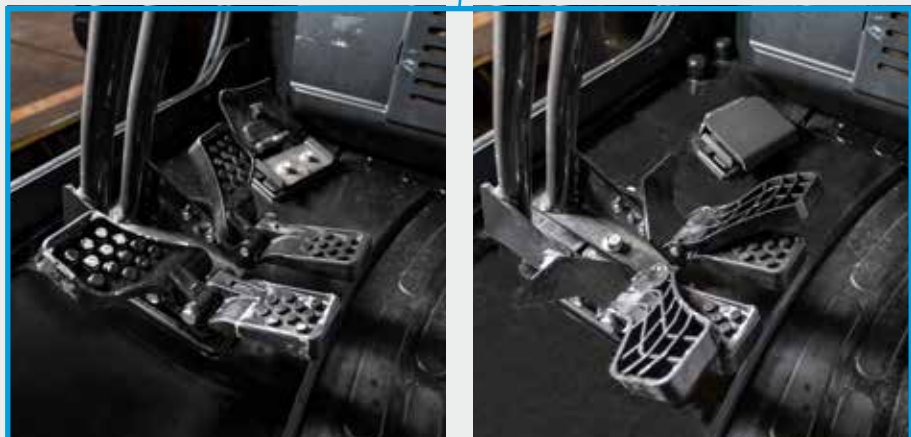


AIR CONDITIONER



#### PEDALS

The larger cab means more comfort and less stress. The compact pedals design gives more leg room.



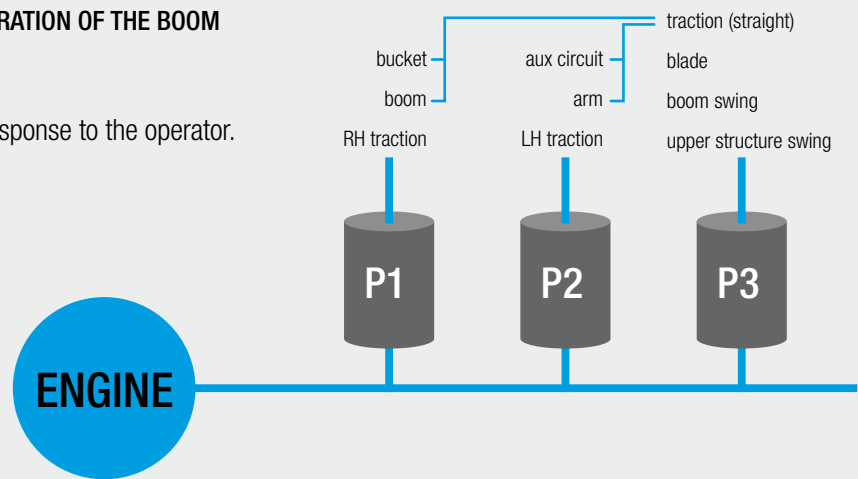


## HIGH DIGGING POWER AND FAST RESPONSE

**3 PUMPS ARE USED FOR INDEPENDENT OPERATION OF THE BOOM AND ARM AND FOR SWING MOVEMENTS.**

(P1 & P2 are variable displacement types)

Operations are agile, fast and powerful in response to the operator.



## OPTIONAL AUXILIARY SYSTEM

In addition to the first auxiliary hydraulic circuit (standard), there are two additional optional hydraulic circuits, which allow the use of multiple attachments such as hydraulic breaker, shear, hydraulic clamps, augers, adjustable and multifunction buckets. The boom swing pedal has two functions: swinging and control of the second auxiliary line, after preselection.

The second auxiliary line can be operated with a proportional type control. No restrictions for combined installation of the load holding valve with the 3 auxiliary lines.

HDV5 series machines are equipped with a reinforced boom.



### HYDRAULIC SYSTEM

Precise sizing of the hydraulic system makes it possible to develop bucket digging force of 21.0 kN (2140 kgf) in model HD27V5; 29.1 kN (2970 kgf) in models HD33V5 and HD37V5; 31 kN (3160 kgf) in model HD50V5; 41.2 kN (4200 kgf) in model HD60V5; and 55.0 kN (5610 kgf) in model HD85V5.

### PROTECTION OF COMPONENTS

The hydraulic lines are routed at the top of the boom and inside the arm with the hoses protected with metal spiral and burst-proof sheaths. Boom and blade cylinder guards.



# INSTRUMENTATION DESIGNED FOR THE OPERATOR

The new instrumentation is designed in compliance with the principles of ergonomics and operator comfort.

The manual controls are all on the right-hand side: all operations, except boom rotation, can be carried out manually. The front monitor of the latest generation facilitates greater control by the operator during work. The servo-assisted joystick controls ensure the utmost precision during all operations.



## ANTI-BURST VALVE KIT (OPTIONAL)

The transfective LCD touch screen is an integral part of the load lifting kit, allowing optimal reading also in bright light conditions and in direct sunlight.

The screen provides various information: engine monitoring, load sensing, diagnostic system, pressure data, maximum load exceeded alarm.

The load indicator can be enabled/disabled for boom cylinder lifting operations and their calibration.

The kit is equipped with a load holding system.



## EASY READ MONITOR

The monitor is located on the right hand side and it allows operations to be monitored during the work. The new angle provides enhanced visibility for the operator. New design.

The electrical power socket and cigar lighter is located on the rear of the display.

## Ergonomic joystick 2nd AUX LINE PROPORTIONAL CONTROL (OPTIONAL)

The auxiliary hydraulic system is controlled by the "roller" lever which allows precision movements with fingertip control; the left-hand button provides continuous operation.

## Lock system

The lock system operates when the safety lever is raised; all operations are inhibited and the parking brake is engaged.

## Ergonomic joystick Proportional command - 1st auxiliary system (std.)

All operations are controlled by a pivot valve for low effort manoeuvres.

The joystick lever allows precise and proportional control.

The joystick RH button provides continuous operation.

## NEW DISPLAY (HD33V5-HD37V5) managed by Can Bus with diagnostics

## Blade lever with two-speed button

## 2nd auxiliary system selector (opt.), 3rd auxiliary system selector (opt.)

## Flashing light control button





# STRUCTURE

## LOWERED CENTRE OF MASS, BALANCE AND STABILITY

The new HDV5 series machines are designed to guarantee the utmost stability. Digging, lifting and loading operations can be carried out in absolute safety.

## OPTIMAL WEIGHT DISTRIBUTION

The large size undercarriage combined with perfect weight distribution make for exceptional stability, superior to that of conventional machines in the same category. The machine is stable also in particularly critical conditions and on soft ground. The large size blade cylinder is well protected against impact and damage.

## BOOM POSITION

The boom position, which is offset with respect to the slewing table, increases the operator's visibility of the digging position.

## SHEET STEEL COVERS

Robust and compact structure with new design



SINGLE SWING PIN



NEW LED WORKING LAMP INCORPORATED IN THE BOOM

## REINFORCED BLADE

The upper reinforced box-section part ensures greater impact resistance; blade contact with ground has been increased.

## ROBUST UNDERCARRIAGE

Steel crawler shoes available

## TRAVEL AND SLEWING GEAR MOTORS

The travel gear motors have integrated disc brakes that lock the crawler shoes safely, also on the edge of an excavation or on a slope.







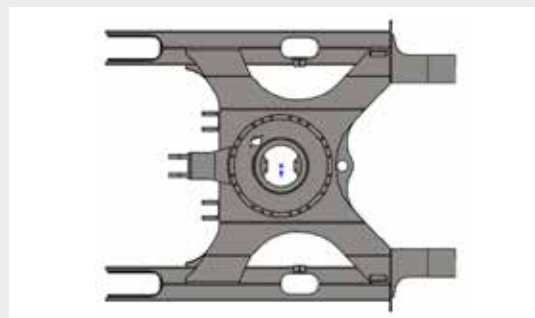
### NEW X-LAYOUT UNDERCARRIAGE

Models HD27V5, HD33V5, HD50V5, HD60V5 and HD85V5 use the more rigid and stronger undercarriage with an X-layout structure.

Model HD37V5 has an extendible 1550 - 1800 mm variable width undercarriage.

The centre of mass of HDV5 machines is 20 mm lower, imparting greater stability and perfect balance. The crawler shoes pre-tensioning system is oversized, the position of the track rollers has been improved and the guide roller has been positioned further back.

New transport anchorage points have been created.



The crawler shoes pre-tensioning system is oversized and the guide roller has been positioned further back

# REDUCED MAINTENANCE COSTS

## TOTAL ACCESSIBILITY

Large covers allow access to the engine and control valve, filters and radiator for inspection and maintenance requirements.

All the maintenance points are concentrated under the side cover, including hydraulic oil and radiator fluid level checking and filling and battery inspection.

Models in the HDV5 series are equipped with a hydraulic oil reservoir air bleed valve, water sedimentation filter and an additional hydraulic oil cooler to prevent overheating caused by continuous operation.



## EASY-TO-REACH FILTERS

The large size covers of the HDV5 series allow easy and fast access for routine and unscheduled maintenance.

Large size openable covers

The filters are positioned to allow easy replacement

The radiator and oil cooler are positioned in a side-by-side configuration, allowing easier cleaning

Improved access to the control valve





### LARGE ENGINE COMPARTMENT HOOD

Access to the engine compartment is provided by a large hood at the rear of the machine.



### SIDE-BY-SIDE COOLER

The side-by-side cooler is positioned to facilitate cleaning operations.



### EASY REFUELLING



# HD27V5

## MINI EXCAVATOR, BIG PERFORMANCE

KATO has developed the HD27V5 mini excavator, equipping it with a KUBOTA D1305-E4B engine which, with its 1261 cc displacement, has a rated output of 17.6 kW at 2400 rpm with top-of-class performance. The operating weight of model HD27V5 is 2725 kg in the cabbed version and 2575 kg in the version with canopy. The standard configuration features a 1550 mm front blade and a 500 mm bucket.



MINI EXCAVATORS 2.7 / 8.5 TONS



## Top-of-class technology

The HD27V5 features compact dimensions, 2440 mm height and length of 4000 mm in the transport configuration.

Swing is 80° to the right and 50° to the left.

Minimum ground clearance is 280 mm with rubber

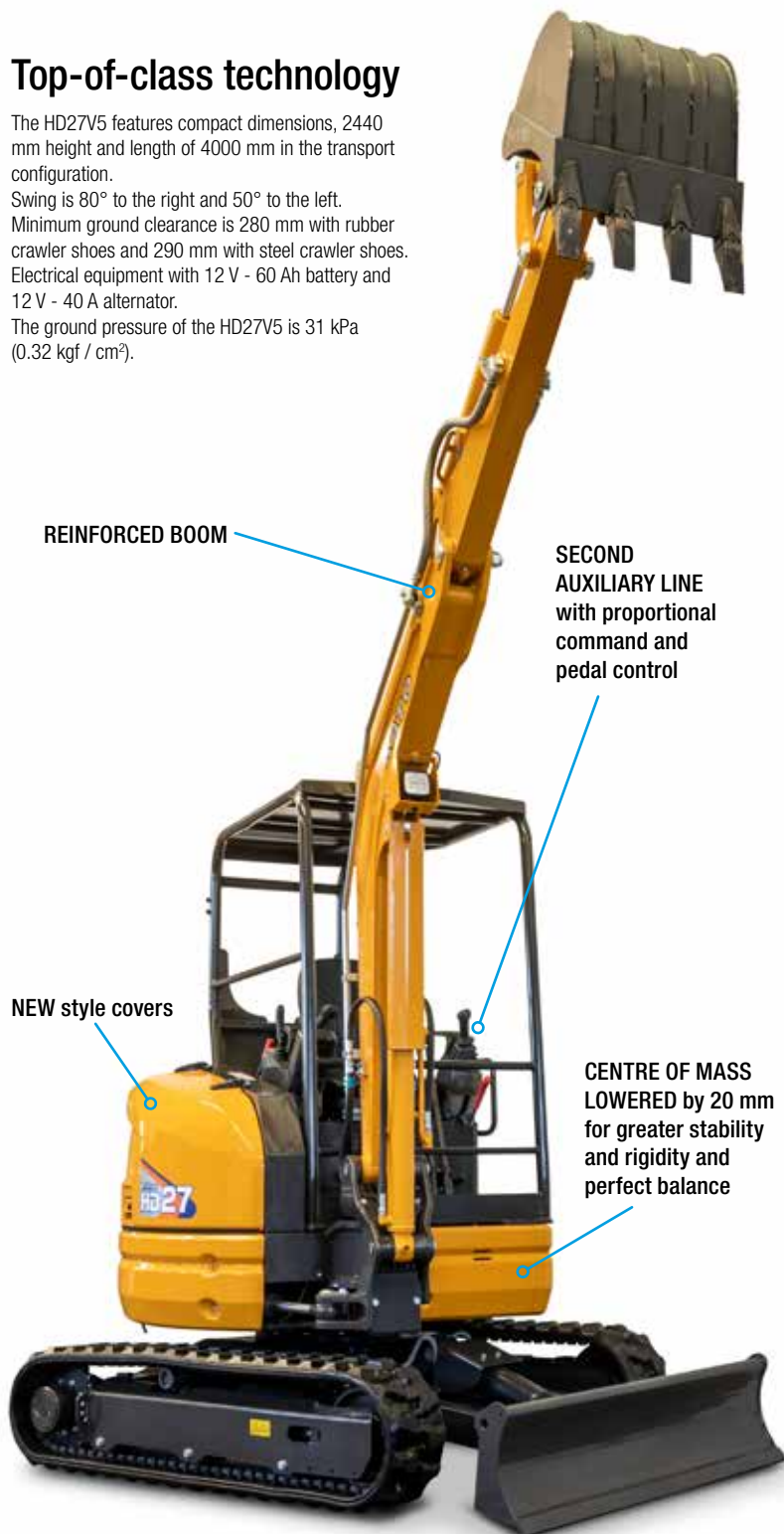
crawler shoes and 290 mm with steel crawler shoes.

Electrical equipment with 12 V - 60 Ah battery and

12 V - 40 A alternator.

The ground pressure of the HD27V5 is 31 kPa

(0.32 kgf / cm<sup>2</sup>).



### KATO HD27V5 ON THE MOVE

The dual travel speed reaches a maximum of 4.4 km / h, and maximum gradeability is 30°.

Swing speed is 9 min<sup>-1</sup>.



### 17.6 KW KUBOTA ENGINE

1261 cc water-cooled 4-stroke engine, 3 cylinders with 78 x 88 mm bore x stroke. Compact, lightweight and straightforward. High torque and power, fuel consumption is 272 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.



### BOOM AND BUCKET

The arm of the HD27V5 is 1100 mm in length and the boom is 2000 mm. The optional arm is 1400 mm in length.

### HYDRAULIC SYSTEM

All machine operations are controlled with joysticks. The hydraulic system is composed of three pumps: 2 x 28.8 l / min + 1 x 19.2 l / min for a pressure of 21.6 MPa (220 kgf / cm<sup>2</sup>).

## TECHNICAL DATA

Engine	KUBOTA D1305-E4B
No. of cylinders / displacement	3 / 1261 cc
Rated output	17.6 kW / 2400 rpm
Machine weight (with rubber crawler shoes)	2500 / 2650 kg (canopy / cab)
Operating weight (with rubber crawler shoes)	2575 / 2725 kg (canopy / cab)
Max. digging depth	2440 mm
Minimum swing radius	2030 / 775 mm (front / rear)
Bucket digging force	2140 kgf
Standard bucket width	500 mm
Standard bucket capacity	0.08 m <sup>3</sup>

# HD33V5

## TECHNOLOGY AND POWER

The HD33V5 mini excavator is equipped with a KUBOTA 3TNV88F engine which, with displacement of 1642 cc, has a rated output of 17.2 kW at 2200 rpm with top-of-class performance.

The operating weight of model HD33V5 is 3245 kg in the cabbed version and 3095 kg in the version with canopy. The standard configuration features a 1550 mm front blade and a 550 mm bucket.



**MINI EXCAVATORS 2.7 / 8.5 TONS**



## Top level technology and performance

Height of the HD33V5 is 2460 mm and length is 4460 mm in the transport configuration.

Swing is 80° to the right and 50° to the left. Minimum ground clearance is 290 mm.

Electrical equipment with a 12 V - 60 Ah battery and 12 V - 40 A alternator. The HD33V5 has ground pressure of 28 kPa (0.29 kgf / cm<sup>2</sup>).



### YANMAR 17.2 KW 3TNV88F ENGINE

1642 cc water-cooled 4-stroke engine, 3 cylinders with 88 x 90 mm bore x stroke. Compact, lightweight and straightforward. High torque and power, fuel consumption is 238 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.



### BOOM AND BUCKET

The arm of the HD33V5 is 1200 mm in length and the boom is 2250 mm.

The 1500 mm long arm is available as an optional.



### HYDRAULIC SYSTEM

All machine operations are controlled with joysticks. The hydraulic system is composed of three pumps: 2 x 37.4 l / min + 1 x 23.1 l / min for a pressure of 24.5 MPa (250 kgf / cm<sup>2</sup>).

### KATO HD33V5 ON THE MOVE

The dual travel speed reaches a maximum of 4.7 km / h, and maximum gradeability is 30°. Swing speed is 9 min<sup>-1</sup>.



## TECHNICAL DATA

Engine	Yanmar 3TNV88F
No. of cylinders / displacement	3 / 1642 cc direct injection
Rated output	17.2 kW / 2200 rpm
Machine weight (with rubber crawler shoes)	3020 / 3170 kg (canopy / cab)
Operating weight (with rubber crawler shoes)	3095 / 3245 kg (canopy / cab)
Max. digging depth	2700 mm
Minimum swing radius	2030 / 795 mm (front / rear)
Bucket digging force	2970 kgf
Standard bucket width	550 mm
Standard bucket capacity	0.09 m <sup>3</sup>

# HD37V5

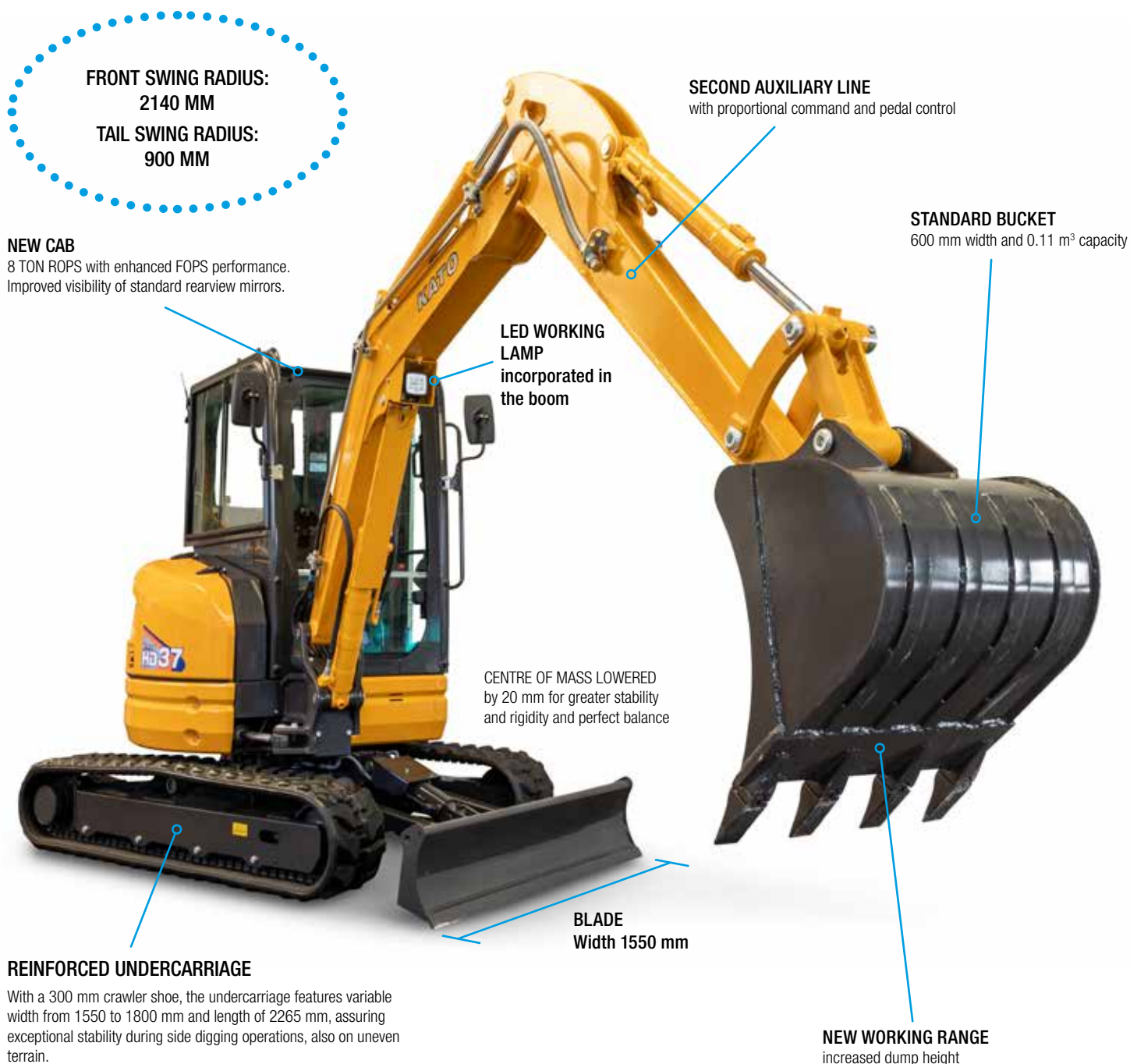
## STRENGTH AND STABILITY

KATO has developed the HD37V5 mini excavator equipped with a Yanmar 3TNV88F direct injection engine with displacement of 1642 cc, which delivers a rated output of 17.2 kW at 2200 rpm.

The operating weight of model HD37V5 is 3675 kg in the cabbed version and 3525 kg in the version with canopy.

The standard configuration features a 1550 mm dozer blade and a 600 mm bucket.

The 1550-1800 mm variable undercarriage, unique in its category, significantly increases stability during side digging, allowing work to be performed also under particularly difficult conditions.



MINI EXCAVATORS 2.7 / 8.5 TONS



## Top-of-class technology

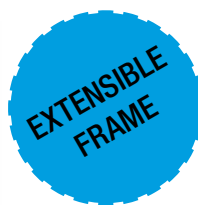
The HD37V5 features compact dimensions: 2460 mm height and length of 4750 mm in the transport configuration.

Swing is 80° to the right and 50° to the left. Minimum ground clearance is 250 mm.

Electrical equipment with a 12 V - 60 Ah battery and 12 V - 40 A alternator. The HD37V5 has ground pressure of 29 kPa (0.30 kgf / cm<sup>2</sup>).



1550 mm



1800 mm

### VARIABLE GAUGE UNDERCARRIAGE

Thanks to the 1550 - 1800 mm extendable lower frame, the HD37V5 greatly increases stability during side digging and lifting operations, even on exceptionally uneven terrain.



### YANMAR 17.2 KW ENGINE

1642 cc 4-stroke water cooled engine, 3 cylinders with 88 x 90 mm bore x stroke. Compact, lightweight and straightforward. High torque and power, fuel consumption is 238 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.

### KATO HD37V5 ON THE MOVE

The dual travel speed reaches a maximum of 4.7 km / h, and maximum gradeability is 30°. Swing speed is 9 min<sup>-1</sup>.

### HYDRAULIC SYSTEM

All machine operations are controlled with joysticks.

The hydraulic system is composed of three pumps: 2 x 37.4 l / min + 1 x 23.1 l / min for a pressure of 24.5 MPa (250 kgf / cm<sup>2</sup>).

### REINFORCED BOOM

The arm of the HD37V5 is 1280 mm in length and the boom is 2420 mm. The 1580 mm long arm is available as an optional.



**NEW DISPLAY**  
managed by Can Bus  
with diagnostics

## TECHNICAL DATA

Engine	Yanmar 3TNV88F
No. of cylinders / displacement	3 / 1642 cc direct injection
Rated output	17.2 kW / 2200 rpm
Machine weight (with rubber crawler shoes)	3450 / 3600 kg (canopy / cab)
Operating weight (with rubber crawler shoes)	3525 / 3675 kg (canopy / cab)
Max. digging depth	3060 mm
Minimum swing radius	2140 / 900 mm (front / rear)
Bucket digging force	2970 kgf
Standard bucket width	600 mm
Standard bucket capacity	0.11 m <sup>3</sup>

# HD50V5

## COMFORT AND RELIABILITY

The powerful HD50V5 mini excavator equipped with a direct injection Kubota 2434 cc engine, which delivers a rated output of 32.4 kW at 2400 rpm.

The operating weight of model HD50V5 is 4875 kg in the cabbed version.

The standard configuration features a 1990 mm dozer blade and a 600 mm bucket.

### LONG BOOM AND SUPER LONG BOOM

Optional 1600 mm boom arm and 1850 mm super long boom

FRONT SWING RADIUS:  
2330 MM

TAIL SWING RADIUS:  
995 MM

LED WORKING  
LAMP incorporated  
in the boom

STANDARD BUCKET  
600 mm width and  
0.14 m<sup>3</sup> capacity

BLADE  
Width 1990 mm

NEW X-LAYOUT UNDERCARRIAGE STRUCTURE

MINI EXCAVATORS 2.7 / 8.5 TONS





## Technology, innovation and power

The HD50V5 features height of 2580 mm (Cab) and length of 5290 mm in the transport configuration. Swing is 80° to the right and 50° to the left. Minimum ground clearance is 300 mm. Electrical equipment with 12 V - 64 Ah battery and 12 V - 40 A alternator. The ground pressure of the HD50V5 is 27 kPa (0.28 kgf / cm<sup>2</sup>).



### KATO HD50V5 ON THE MOVE

The dual travel speed reaches a maximum of 4.6 km / h, and maximum gradeability is 30°. Swing speed is 9.3 min<sup>-1</sup>.

### HYDRAULIC SYSTEM

All machine operations are controlled with joysticks. The hydraulic system is composed of three pumps: 2 x 60 l / min + 1 x 44.2 l / min for a pressure of 24.5 MPa (250 kgf / cm<sup>2</sup>).

### KUBOTA 32.4 KW ENGINE

2434 cc 4-stroke engine, water cooled. Compact, lightweight and straightforward. High torque and power, fuel consumption is 238 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.

### BOOM AND BUCKET

The arm of the HD50V5 is 1350 mm in length and the boom is 2700 mm. The 1600 mm long boom and 1850 mm super long boom are available as optional equipment.



## TECHNICAL DATA

Engine	Kubota V2403-CR-E5B
No. of cylinders / displacement	4 / 2434 cc direct injection
Rated output	32.4 kW / 2400 rpm
Machine weight (with cab)	4800 / 4840 kg (rubber shoes / steel shoes)
Operating weight (with cab)	4875 / 4915 kg (rubber shoes / steel shoes)
Max. digging depth	3330 mm
Minimum swing radius	2330 / 995 mm (front / rear)
Bucket digging force	3160 kgf
Standard bucket width	600 mm
Standard bucket capacity	0.14 m <sup>3</sup>

# HD60V5

## PERFORMANCE CHARACTERISTICS TYPICAL OF A LARGE EXCAVATOR

The powerful HD60V5 mini excavator equipped with a direct injection Kubota 2434 cc engine, which delivers a rated output of 32.4 kW at 2400 rpm.

The operating weight of model HD60V5 is 5595 kg in the cabbed version.

The standard configuration features a 1990 mm dozer blade and a 700 mm bucket.

### REINFORCED BOOM

The boom of the HD60V5 is 1600 mm in length and the boom is 2900 mm.

The 1850 mm long boom is available as an optional.

FRONT SWING RADIUS:  
2450 MM

TAIL SWING RADIUS:  
1120 MM



**STANDARD BUCKET**  
700 mm width and 0.18 m<sup>3</sup> capacity

**NEW X-LAYOUT UNDERCARRIAGE  
STRUCTURE**

MINI EXCAVATORS 2.7 / 8.5 TONS





### KUBOTA 32.4 KW ENGINE

2434 cc 4-stroke water cooled engine. Compact, lightweight and straightforward. High torque and power, fuel consumption is 238 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.



### HYDRAULIC SYSTEM

All machine operations are controlled with joysticks. The hydraulic system is composed of three pumps: 2 x 60 l / min + 1 x 44.2 l / min for a pressure of 24.5 MPa (250 kgf / cm<sup>2</sup>).



## Controlled power

The HD60V5 features height of 2580 mm (Cab) and length of 5510 mm in the transport configuration. Swing is 80° to the right and 50° to the left. Minimum ground clearance is 300 mm. Electrical equipment with 12 V - 64 Ah battery and 12 V - 40 A alternator. The ground pressure of the HD60V5 is 31 kPa (0.32 kgf / cm<sup>2</sup>).

### KATO HD60V5 ON THE MOVE

The travel system has two speeds 2.9 / 4.6 km / h, with gradeability of 30°. Swing speed is 9.3 min<sup>-1</sup>.



## TECHNICAL DATA

Engine	Kubota V2403-CR-E5B
No. of cylinders / displacement	4 / 2434 cc direct injection
Rated output	32.4 kW / 2400 rpm
Machine weight (with cab)	5520 / 5560 kg (rubber shoes / steel shoes)
Operating weight (with cab)	5595 / 5635 kg (rubber shoes / steel shoes)
Max. digging depth	3800 mm
Minimum swing radius	2450 / 1120 mm (front / rear)
Bucket digging force	4200 kgf
Standard bucket width	700 mm
Standard bucket capacity	0.18 m <sup>3</sup>

# HD85V5

## MIDI EXCAVATOR TOP-OF-THE-RANGE

Robust and comfortable, model HD85V5 reaches a digging depth of 4020 mm with bucket digging force of 55 kN (5610 kgf). The Yanmar 3318 cc direct injection engine delivers a rated output of 42.7 kW at 2100 rpm.

The operating weight of model HD85V5 is 8515 kg in the version with ROPS.

The standard configuration features a 2200 mm dozer blade and a 760 mm bucket.



MINI EXCAVATORS 2.7 / 8.5 TONS



## Optimal weight distribution

The HD85V5 features generous dimensions with height of 2660 mm and length of 6100 mm in the transport configuration.

The minimum ground clearance is 350 mm and ground pressure is 41 kPa (0.418 kgf / cm<sup>2</sup>).



### HIGH CAPACITY TANK

Excellent operational autonomy thanks to the 110 litre fuel tank



### YANMAR 3318 CC ENGINE

4-stroke water-cooled engine with a rated output of 42.7 kW at 2100 rpm. High torque and power, fuel consumption is 236 g/kW-h. Minimal emissions and easy maintenance with reduced service and running costs.



### KATO HD85V5 ON THE MOVE

The travel system has two speeds 2.5 / 4.4 km / h, with gradeability of 30°. Swing speed is 9 min<sup>-1</sup>.



### HYDRAULIC SYSTEM

All machine operations are controlled by joysticks. The hydraulic system is composed of three pumps: 2 x 75.6 l / min + 54.2 l / min for a pressure of 24.5 MPa (250 kgf / cm<sup>2</sup>).

## TECHNICAL DATA

Engine	Yanmar 4TNV98-C
No. of cylinders / displacement	4 / 3318 cc direct injection
Rated output	42.7 kW / 2100 rpm
Machine weight (with cab)	8440 / 8490 kg (rubber shoes / steel shoes)
Operating weight (with cab)	8515 / 8565 kg (rubber shoes / steel shoes)
Max. digging depth	4020 mm
Minimum swing radius	2640 / 1450 mm (front / rear)
Bucket digging force	5610 kgf
Standard bucket width	760 mm
Standard bucket capacity	0.25 m <sup>3</sup>

# features

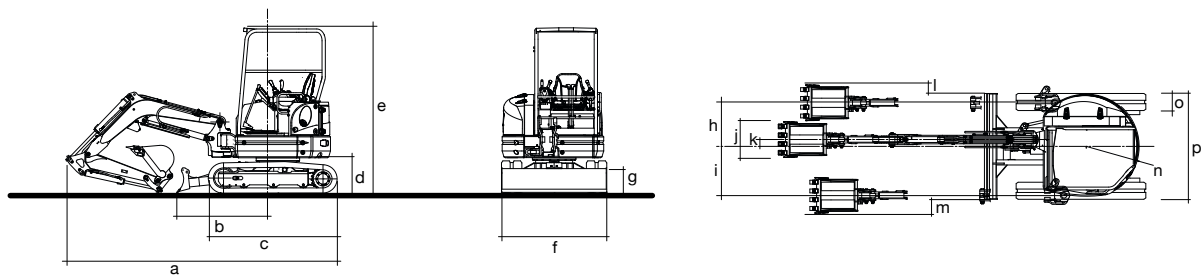
	HD27V5	HD33V5	HD37V5
<b>GENERAL SPECIFICATIONS</b>			
Standard bucket capacity (ISO)	0.08 m³	0.09 m³	0.11 m³
Standard bucket width	500 mm	550 mm	600 mm
Machine weight RS / SS* Canopy	2500 / 2630 kg	3020 / 3070 kg	3450 / 3500 kg
Machine weight RS / SS* Cab	2650 / 2780 kg	3170 / 3220 kg	3600 / 3650 kg
Operating weight RS / SS* Canopy	2575 / 2705 kg	3095 / 3145 kg	3525 / 3575 kg
Operating weight RS / SS* Cab	2725 / 2855 kg	3245 / 3295 kg	3675 / 3725 kg
Ground pressure	31 kPa (0.32 kgf / cm²)	28 kPa (0.29 kgf / cm²)	29 kPa (0.30 kgf / cm²)
*RS/SS Rubber Shoes/Steel Shoes			
<b>ENGINE</b>			
Model	Kubota D1305-E4B	Yanmar 3TNV88F	Yanmar 3TNV88F
No. of cylinders and displacement	3 / 1261 cc	3 / 1642 cc direct injection	3 / 1642 cc direct injection
Bore x stroke	78 x 88 mm	88 x 90 mm	88 x 90 mm
Rated output (ISO 1585)	17.6 kW (23.9 hp) at 2400 rpm	17.2 kW (23.4 hp) at 2200 rpm	17.2 kW (23.4 hp) at 2200 rpm
Fuel Consumption	272 g / kWh	238 g / kWh	238 g / kWh
Engine oil pan capacity	5.7 l (Maximum level)	6.7 l (Maximum level)	6.7 l (Maximum level)
<b>DIMENSIONS</b>			
Length	4000 mm	4460 mm	4750 mm
Canopy/Cab Height	2440 mm / 2470 mm	2460 mm / 2490 mm	2460 mm / 2490 mm
Width	1550 mm	1550 mm	1550-1800 mm
Undercarriage length	1900 mm	2100 mm	2265 mm
Undercarriage width	1550 mm	1550 mm	1550-1800 mm
Distance between drive sprocket and front idler	1470 mm	1650 mm	1815 mm
Shoes width	250 mm	300 mm	300 mm
Minimum ground clearance	280 mm	290 mm	250 mm
<b>BUCKET PERFORMANCE</b>			
Maximum digging radius	4560 mm	4880 mm	5210 mm
Max. digging depth	2440 mm	2700 mm	3060 mm
Maximum height of cutting edge	4220 mm	4670 mm	4990 mm
Maximum dumping height	2900 mm	3320 mm	3460 mm
Maximum vertical wall	1840 mm	2320 mm	2570 mm
<b>SLEWING SYSTEM</b>			
Travel speed	2.5 / 4.4 km / h	2.7 / 4.7 km / h	2.7 / 4.7 km / h
Gradeability	30°	30°	30°
Swing speed	9 min⁻¹	9 min⁻¹	9 min⁻¹
Bucket digging force	21 kN (2140 kgf)	29.1 kN (2970 kgf)	29.1 kN (2970 kgf)
<b>CAPACITIES</b>			
Fuel tank capacity	42 l	42 l	42 l
Hydraulic reservoir capacity	33 l	33 l	33 l
Hydraulic circuit total capacity	50 l	50 l	50 l
<b>ELECTRICAL SYSTEM</b>			
Battery	12 V - 60 Ah	12 V - 60 Ah	12 V - 60 Ah
Alternator	12 V - 40 A	12 V - 40 A	12 V - 40 A
Governor	IC type	IC type	IC type
Starter motor	12 V - 1.2 kW	12 V - 1.7 kW	12 V - 1.7 kW
<b>ARM SWING SYSTEM</b>			
Minimum front swing radius	2030 mm	2030 mm	2140 mm
Standard arm length	1100 mm	1200 mm	1280 mm
Main boom length	2000 mm	2250 mm	2420 mm
Rear swing minimum radius	775 mm	795 mm	900 mm
Right-hand swing	80°	80°	80°
Left-hand swing	50°	50°	50°
<b>HYDRAULIC SYSTEM</b>			
Pressure	21.6 MPa (220 kgf / cm²)	24.5 MPa (250 kgf / cm²)	24.5 MPa (250 kgf / cm²)
Pumps maximum delivery	28.8 x 2 + 19.2 l / min	37.4 x 2 + 23.1 l / min	37.4 x 2 + 23.1 l / min
Control system	joystick	joystick	joystick
Number of pumps	3	3	3
<b>BLADE</b>			
Width	1550 mm	1550 mm	1550 mm
Height	370 mm	370 mm	370 mm
Upward movement (distance from ground)	345 mm	370 mm	370 mm
Maximum downward movement	430 mm	455 mm	445 mm
<b>OTHER DATA</b>			
Sound power level LWA (2000/14/EC)	94 dB	94 dB	94 dB

MINI EXCAVATORS 2.7 / 8.5 TONS



	HD50V5	HD60V5	HD85V5
<b>GENERAL SPECIFICATIONS</b>			
Standard bucket capacity (ISO)	0.14 m <sup>3</sup>	0.18 m <sup>3</sup>	0.25 m <sup>3</sup>
Standard bucket width	600 mm	700 mm	760 mm
Machine weight RS / SS* Canopy	4650 / 4690 kg	5370 / 5410 kg	-
Machine weight RS / SS* Cab	4800 / 4840 kg	5520 / 5560 kg	8440 / 8490 kg (standard boom) 8470 / 8520 kg (with long boom)
Operating weight RS / SS* Canopy	4725 / 4765 kg	5445 / 5485 kg	-
Operating weight RS / SS* Cab	4875 / 4915 kg	5595 / 5635 kg	8515 / 8565 kg (standard boom) 8545 / 8595 kg (with long boom)
Ground pressure	27 kPa (0.28 kgf / cm <sup>2</sup> )	31 kPa (0.32 kgf / cm <sup>2</sup> )	41 kPa (0.418 kgf / cm <sup>2</sup> )
*RS/SS Rubber Shoes/Steel Shoes			
<b>ENGINE</b>			
Model	Kubota V2403-CR-E5B	Kubota V2403-CR-E5B	Yanmar 4TNV98-C
No. of cylinders and displacement	4 / 2434 cc direct injection	4 / 2434 cc direct injection	4 / 3318 cc direct injection
Bore x stroke	87 x 102.4 mm	87 x 102.4 mm	98 x 110 mm
Rated output (ISO 1585)	32.4 kW (44.1 hp) at 2400 rpm	32.4 kW (44.1 hp) at 2400 rpm	42.7 kW (58.1 hp) at 2100 rpm
Fuel Consumption	238 g / kWh	238 g / kWh	236 g / kWh
Engine oil pan capacity	9.7 l (Maximum level)	9.7 l (Maximum level)	10.2 l (Maximum level)
<b>DIMENSIONS</b>			
Length	5290 mm	5510 mm	6100 mm
Canopy/Cab Height	2550 mm / 2580 mm	2550 mm / 2580 mm	- / 2660 mm
Width	1990 mm	1990 mm	2200 mm
Undercarriage length	2500 mm	2500 mm	2730 mm
Undercarriage width	1990 mm	1990 mm	2200 mm
Distance between drive sprocket and front idler	1970 mm	1970 mm	2155 mm
Shoes width	400 mm	400 mm	450 mm
Minimum ground clearance	300 mm	300 mm	350 mm
<b>BUCKET PERFORMANCE</b>			
Maximum digging radius	5760 mm	6200 mm	6830 mm
Max. digging depth	3330 mm	3800 mm	4020 mm
Maximum height of cutting edge	5380 mm	5710 mm	6700 mm
Maximum dumping height	3720 mm	4050 mm	4700 mm
Maximum vertical wall	2520 mm	2980 mm	3170 mm
<b>SLEWING SYSTEM</b>			
Travel speed	2.9 / 4.6 km / h	2.9 / 4.6 km / h	2.5 / 4.4 km / h
Gradeability	30°	30°	30°
Swing speed	9.3 min <sup>-1</sup>	9.3 min <sup>-1</sup>	9 min <sup>-1</sup>
Bucket digging force	31 kN (3160 kgf)	41.2 kN (4200 kgf)	55 kN (5610 kgf)
<b>CAPACITIES</b>			
Fuel tank capacity	66 l	66 l	110 l
Hydraulic reservoir capacity	56 l	56 l	75 l
Hydraulic circuit total capacity	75 l	75 l	125 l
<b>ELECTRICAL SYSTEM</b>			
Battery	12 V - 64 Ah	12 V - 64 Ah	12 V - 72 Ah
Alternator	12 V - 40 A	12 V - 40 A	12 V - 40 A
Governor	IC type	IC type	IC type
Starter motor	12 V - 2.0 kW	12 V - 2.0 kW	12 V - 3.0 kW
<b>ARM SWING SYSTEM</b>			
Minimum front swing radius	2330 mm	2450 mm	2640 mm
Standard arm length	1350 mm	1600 mm	1780 mm
Main boom length	2700 mm	2900 mm	3150 mm
Rear swing minimum radius	995 mm	1120 mm	1450 mm
Right-hand swing	80°	80°	80°
Left-hand swing	50°	50°	50°
<b>HYDRAULIC SYSTEM</b>			
Pressure	24.5 MPa (250 kgf / cm <sup>2</sup> )	24.5 MPa (250 kgf / cm <sup>2</sup> )	24.5 MPa (250 kgf / cm <sup>2</sup> )
Pumps maximum delivery	60 x 2 + 44.2 l / min	60 x 2 + 44.2 l / min	75.6 x 2 + 54.2 l / min
Control system	joystick	joystick	joystick
Number of pumps	3	3	3
<b>BLADE</b>			
Width	1990 mm	1990 mm	2200 mm
Height	390 mm	390 mm	500 mm
Upward movement (distance from ground)	465 mm	465 mm	420 mm
Maximum downward movement	435 mm	435 mm	440 mm
<b>OTHER DATA</b>			
Sound power level LWA (2000/14/EC)	97 dB	97 dB	98 dB

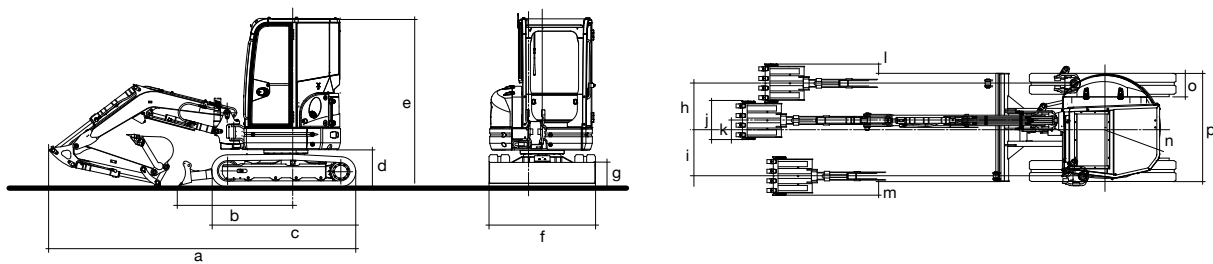
HD27V5



DIMENSIONS (mm)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
4000	1490	1900	520	2440	1550	370	640	720	500	100	125	195	775	250	1550

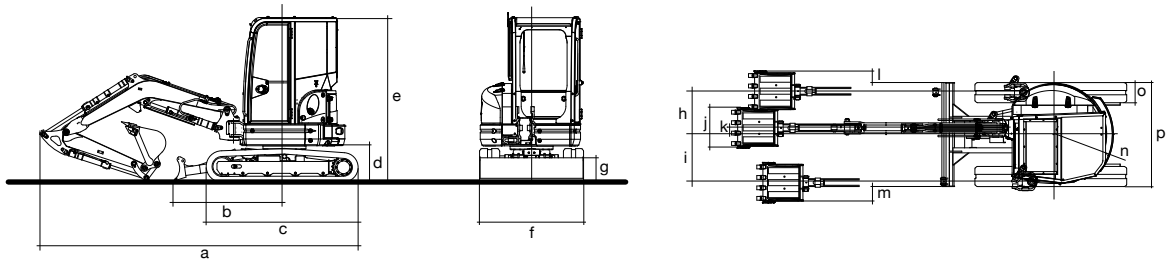
HD33V5



DIMENSIONS (mm)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
4460	1550	2100	540	2490	1550	370	635	700	550	100	135	200	795	300	1550

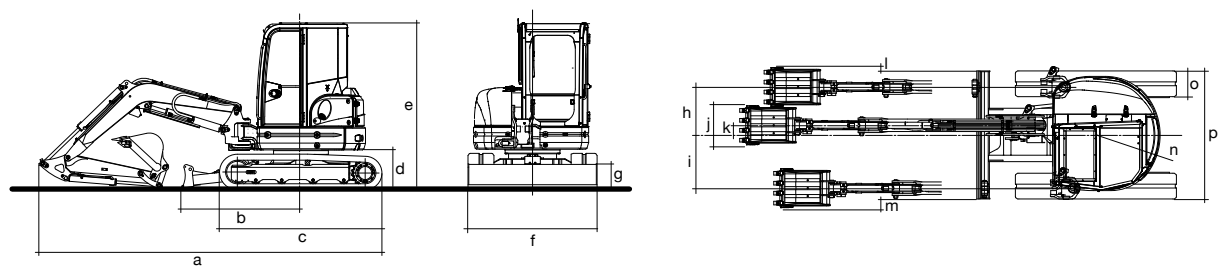
HD37V5



DIMENSIONS (mm)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
4750	1660	2265	540	2490	1550	370	650	720	600	100	175	245	900	300	1550-1800

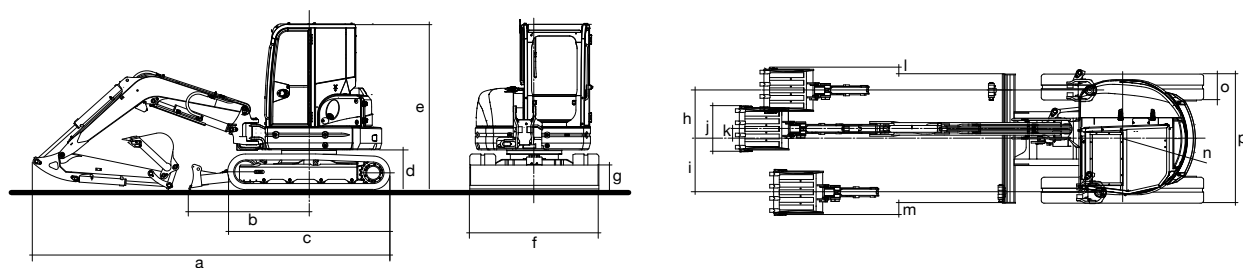
HD50V5



DIMENSIONS (mm)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
5290	1840	2500	610	2580	1990	390	750	830	600	150	55	135	995	400	1990

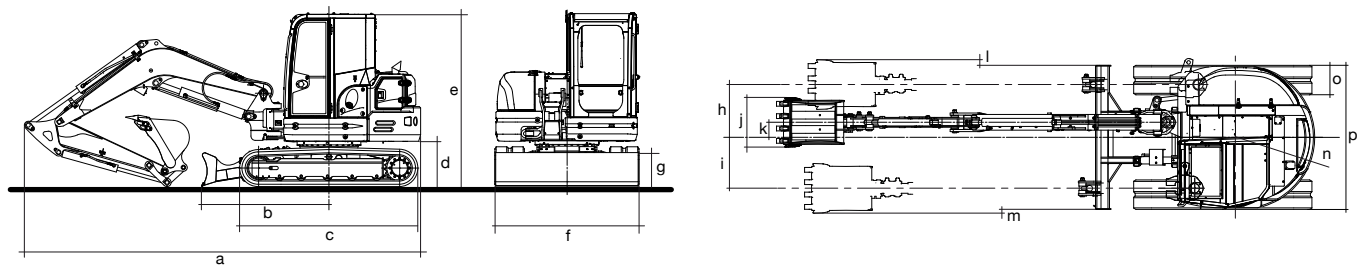
HD60V5



DIMENSIONS (mm)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
5510	1840	2500	610	2580	1990	390	750	830	700	150	105	185	1120	400	1990

HD85V5



DIMENSIONS (mm)

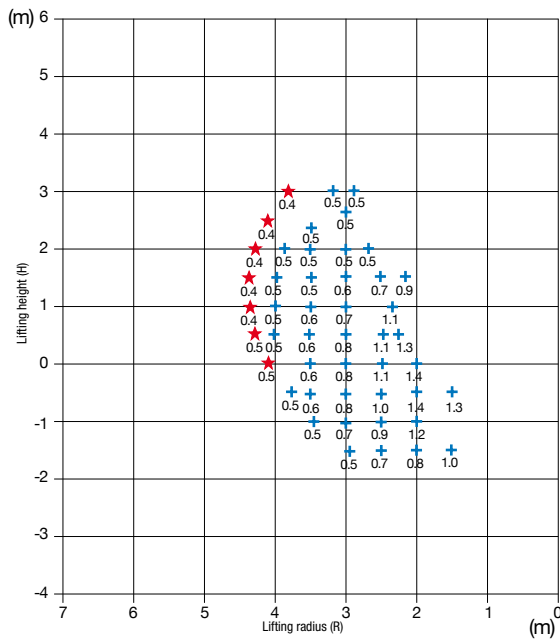
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
6100	1950	2730	690	2660	2200	500	810	780	760	230	90	60	1450	450	2200



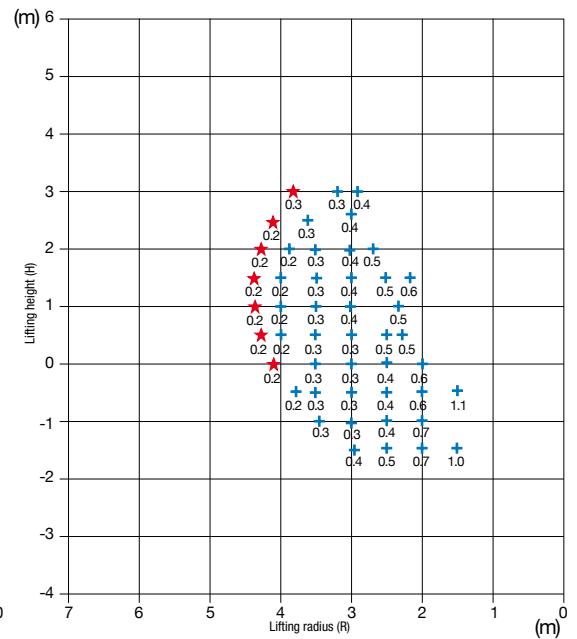
# Lifting capacity

HD27V5

Front lifting, with blade on the ground, with standard arm

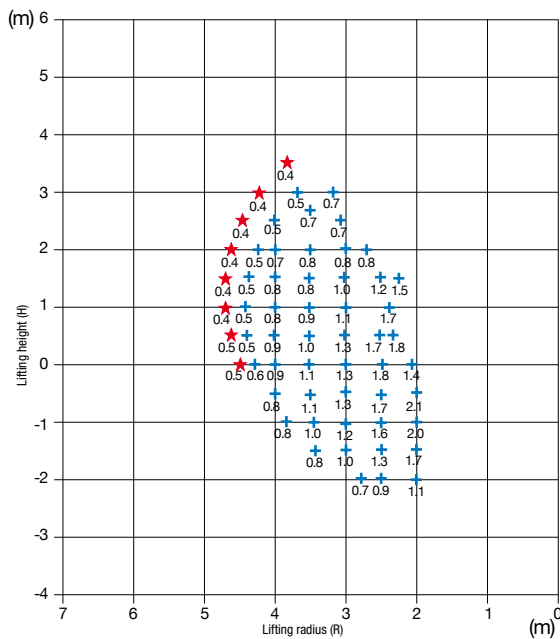


Side lifting with standard arm

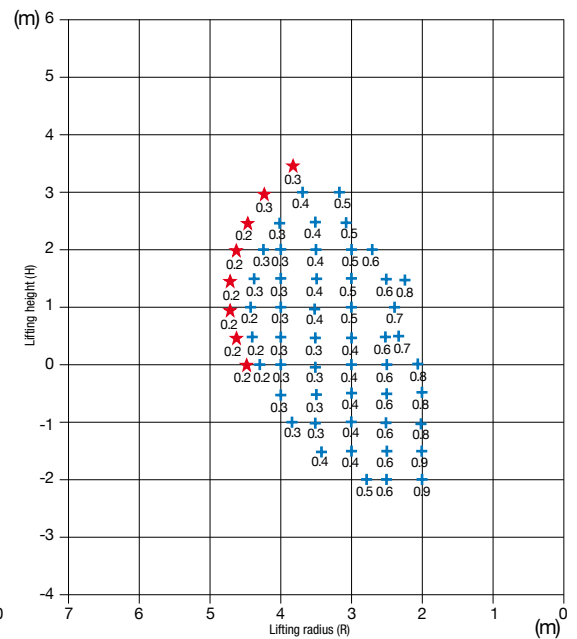


HD33V5

Front lifting, with blade on the ground, with standard arm

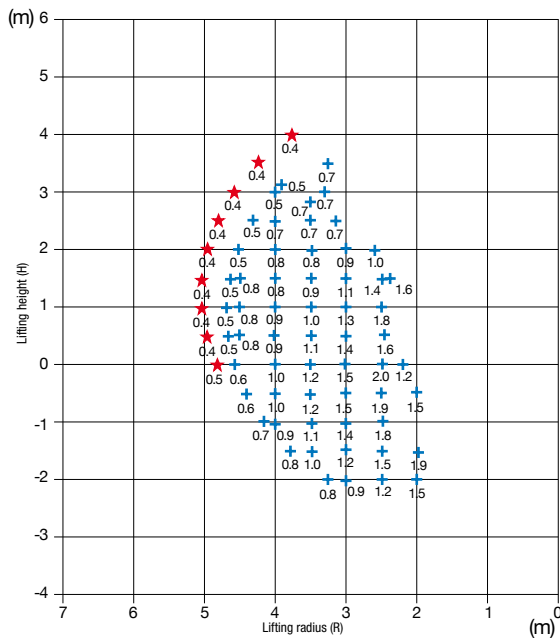


Side lifting with standard arm

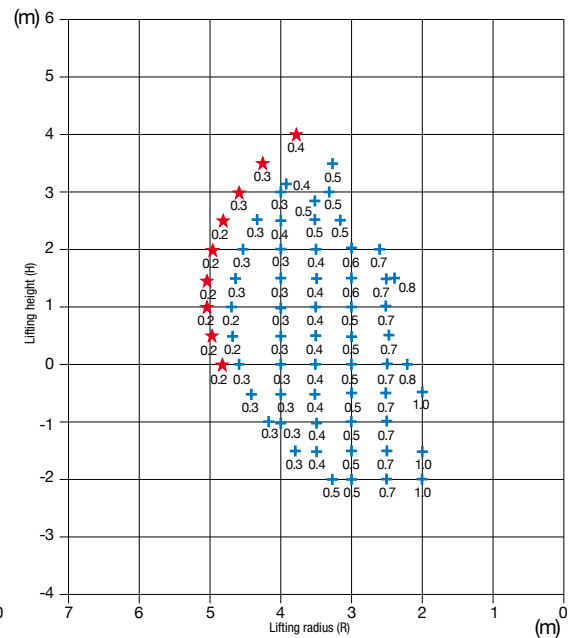


HD37V5

Front lifting, with blade on the ground, with standard arm



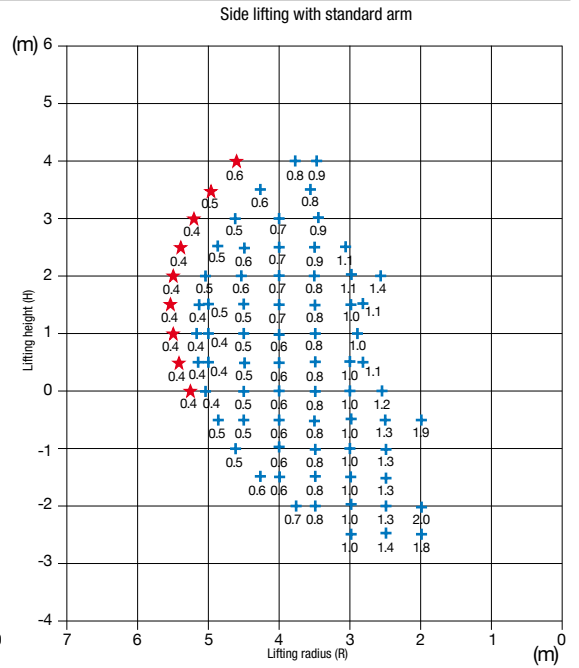
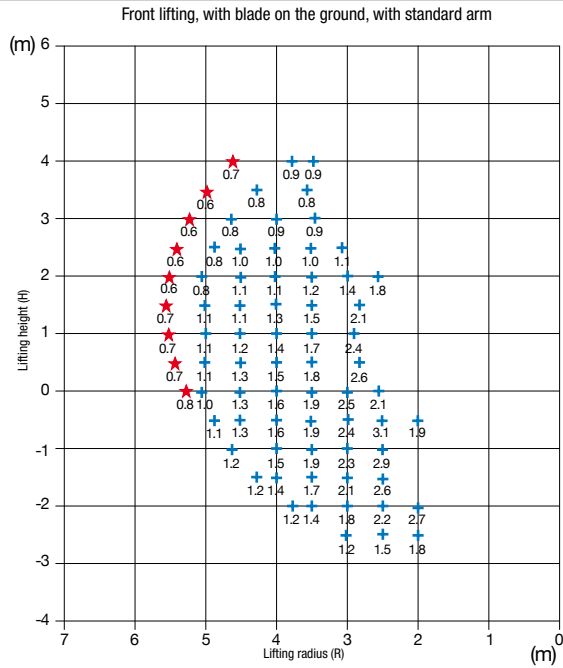
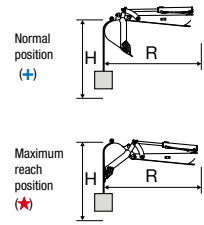
Side lifting, spanner contracted, with standard arm



MINI EXCAVATORS 2.7 / 8.5 TONS

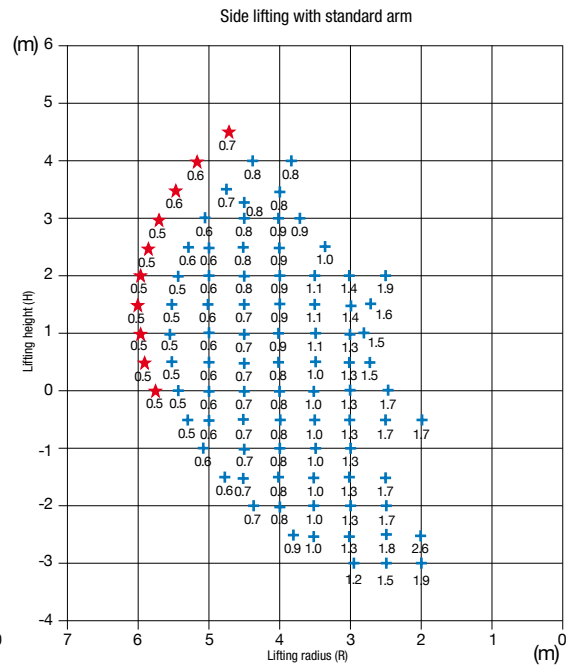
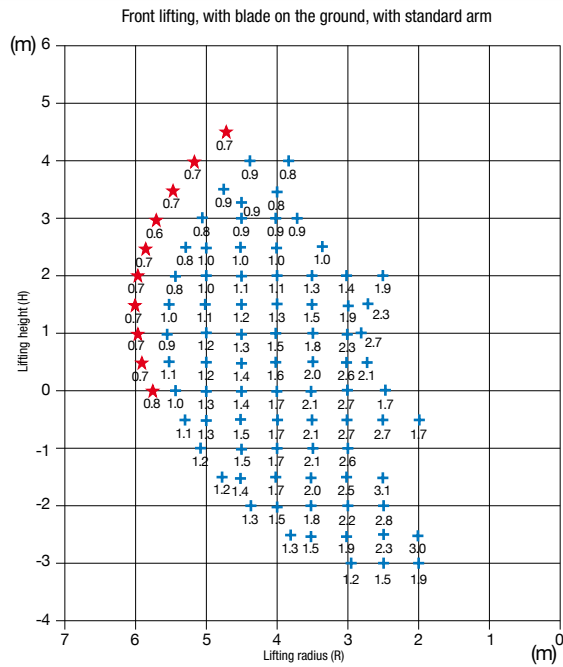
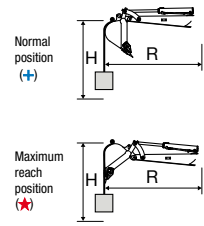
## HD50V5

Unit of measurement: tons  
+ : standard lifting position  
★ : Maximum lifting radius



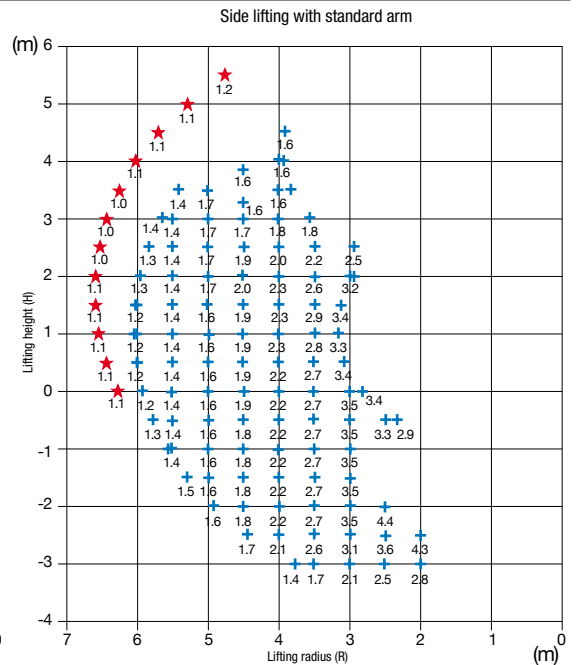
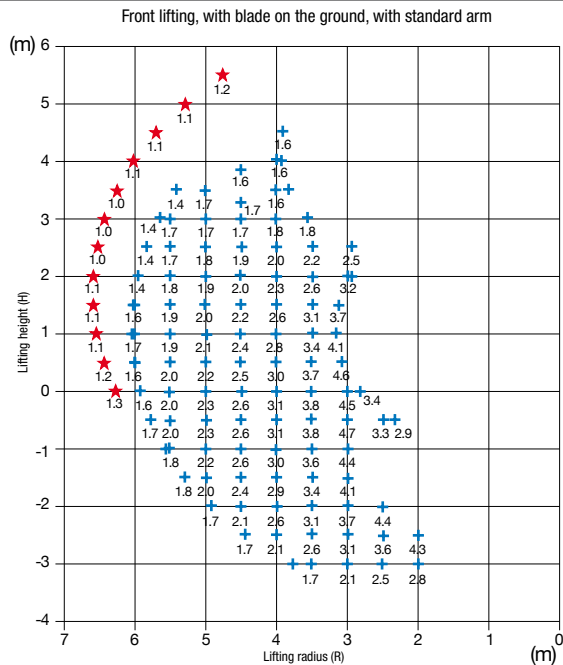
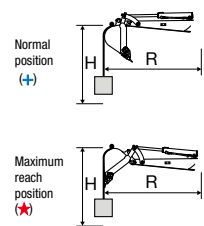
## HD60V5

Unit of measurement: tons  
+ : standard lifting position  
★ : Maximum lifting radius



## HD85V5

Unit of measurement: tons  
+ : standard lifting position  
★ : Maximum lifting radius



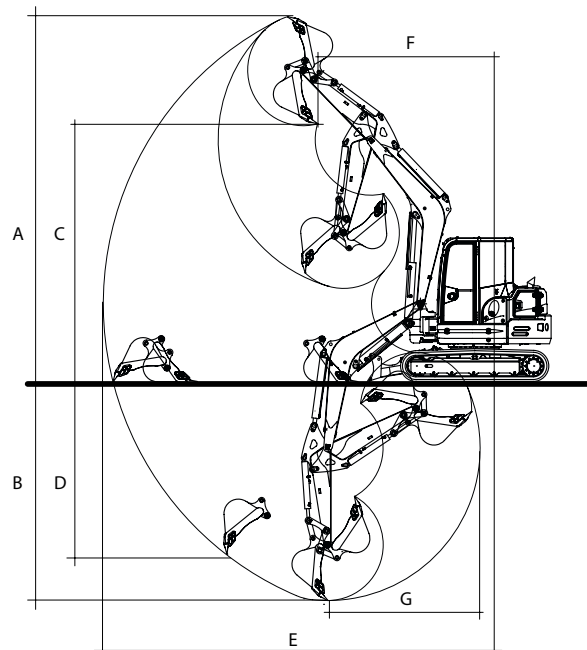
# Equipment

	HD27V5	HD33V5	HD37V5	HD50V5	HD60V5	HD85V5
<b>SUPPORT FRAME</b>						
Rubber shoes (width mm)	250	300	300	400	400	450
Attachment points for lifting-anchoring-towing and lubrication of the swing cylinder foot	std	std	std	std	std	std
Variable gauge undercarriage (mm) - Backfill blade	-	-	1550-1800 l 1550	-	-	-
Steel shoes (width mm)	250 opt	300 opt	300 opt	400 opt	400 opt	450 opt
<b>ENGINE</b>						
Two-phase dry air filter with visual clogging indicator	std	std	std	std	std	std
Electric pre-heating device	std	std	std	std	std	std
Fuel water separator	std	std	std	std	std	std
Fuel tank with drain plug	plastic	plastic	plastic	plastic	plastic	steel
Engine governor	std	std	std	std	std	std
Auto-Idle and Eco-Mode (reduced consumption)	-	std	std	std	std	std
<b>ELECTRICAL SYSTEM</b>						
12V battery and fusebox	std	std	std	std	std	std
<b>DRIVING SEAT</b>						
Longitudinal adjustment bucket seat with vinyl upholstery	std	std	std	std	std	-
Fabric seat	opt	opt	opt	opt	opt	std
Non-slip rubber mat	std	std	std	std	std	std
Wrist support	std	std	std	std	std	std
Seatbelt	with reel	with reel	with reel	with reel	with reel	with reel
High speed control device	std	std	std	std	std	std
Travel control pedals	std	std	std	std	std	std
<b>EQUIPMENT AND MONITORING DEVICES</b>						
Work lights on/off switch; axillary system control.	std	std	std	std	std	std
Aux. system proportional control button on joystick	std	std	std	std	std	std
Water temperature gauge	analogue	analogue	analogue	analogue	analogue	analogue
Fuel level control instrument	analogue	analogue	analogue	analogue	analogue	analogue
Hour meter	std	std	std	std	std	std
Warning light for: preheating, engine oil pressure, battery charge, water temperature	std	std	std	std	std	std
High speed indicator light	std	std	std	std	std	std
Engine alarm device in case of overheating or low oil pressure	std	std	std	std	std	std
Engine stop button and indicator light	-	std	std	std	std	std
Provision for flashing light control (Pushbutton)	std	std	std	-	-	-
<b>CANOPY VERSION</b>						
FOPS - falling object protective structure	std	std	std	std	std	std
TOPS and ROPS - tipping and roll-over protective structure	std	std	std	std	std	std
<b>CAB VERSION</b>						
TOPS / ROPS protection against tipping / rolling	std	std	std	std	std	std
FOPS head guard against falling objects	opt	opt	opt	opt	opt	opt
Heating with fan	std	std	std	std	std	std
Front upper sliding window under canopy	std	std	std	std	std	std
Removable lower front window	std	std	std	std	std	std
Right-hand side sliding window	std	std	std	std	std	std
Grab handles and full wide door handle to facilitate closing from the inside	std	std	std	std	std	std
Provision for radio	std	std	std	std	std	std
Front window wiper and washer	std	std	std	std	std	std
Rearview mirrors (right and left) kit for cab	std	std	std	std	std	std
Travel alarm	opt	opt	opt	opt	opt	opt
<b>HYDRAULIC SYSTEM</b>						
ISO assisted hydraulic controls	std	std	std	std	std	std
Gear pump / variable flow rate (std)	std	std	std	std	std	std
Hydraulic boom swing control	pedal	pedal	pedal	pedal	pedal	pedal
Crawler width adjustment control	-	-	std	-	-	-
Working lamp positioned centrally on the boom	std	std	std	std	std	std
<b>DIGGING AND MOVING EQUIPMENT</b>						
Boom (length in mm)	2000	2250	2420	2700	2900	3150
Arm (length in mm)	1100	1200	1280	1350	1600	1780
Long arm (length in mm)	+300mm (opt)	+300mm (opt)	+300mm (opt)	+250mm (opt)	+250mm (opt)	+300mm (opt)
Super long arm (length in mm)	-	-	-	+500mm (opt)	-	-
Boom hydraulic swinging angle (RH/LH)	80°/50°	80°/50°	80°/50°	80°/50°	80°/50°	80°/50°
Stroke limit cushioning on boom cylinder	std	std	std	std	std	std
Stroke limit cushioning on arm cylinder	std	std	std	std	std	std
Rapid attachment of mechanical accessories	opt	opt	opt	opt	opt	opt
Buckets in various sizes	opt	opt	opt	opt	opt	opt
Loads handling device	opt	opt	opt	opt	opt	opt
<b>HYDRAULIC CIRCUITS FOR ACCESSORIES</b>						
Hydraulic circuit for breaker with direct return to reservoir for double-acting accessories	std	std	std	std	std	std
2nd hydraulic circuit for double-acting accessories	opt	opt	opt	opt	opt	opt
3rd hydraulic circuit for double-acting accessories	opt	opt	opt	opt	opt	opt
<b>SAFETY AND COMFORT</b>						
Operating and travel controls lock out to enable the operator to exit	std	std	std	std	std	std
Single key for ignition, fuel filler cap and cover locks	std	std	std	std	std	std
Fuel tank filler cap with lock and mesh strainer	std	std	std	std	std	std
Emergency escape hammer in cab	std	std	std	std	std	std
Upper structure automatic brake	std	std	std	std	std	std
Boom cylinder anti-drift system	std	std	std	std	std	std
Horn	std	std	std	std	std	std
Cab air conditioning	-	opt	opt	opt	opt	std
Internal rear counter weight	-	std	opt	-	-	-
External rear counter weight	-	opt	std	opt	-	std



# working range

the drawing is generic and provided exclusively for illustrative purposes



	HD27V5	HD33V5	HD37V5	HD50V5	HD60V5	HD85V5
A Maximum digging height	4220 / 4410* mm	4670 / 4870* mm	4990 / 5180* mm	5380 / 5470* / 5610** mm	5710 / 5860* mm	6700 / 6920* mm
B Maximum digging depth (without blade)	2440 / 2740* mm	2700 / 2970* mm	3060 / 3330* mm	3330 / 3580* / 3830** mm	3800 / 4040* mm	4020 / 4320* mm
C Maximum dumping height	2900 / 3090* mm	3320 / 3510* mm	3460 / 3660* mm	3720 / 3820* / 3960** mm	4050 / 4200* mm	4700 / 4910* mm
D Maximum vertical digging depth	1840 / 2120* mm	2320 / 2610* mm	2570 / 2800* mm	2520 / 2690* / 2930** mm	2980 / 3220* mm	3170 / 3460* mm
E Maximum digging radius	4560 / 4840* mm	4880 / 5160* mm	5210 / 5490* mm	5760 / 5970* / 6200** mm	6200 / 6440* mm	6830 / 7110* mm
F Front minimum swing radius	2030 / 2090* mm	2030 / 2100* mm	2140 / 2200* mm	2330 / 2420* / 2460** mm	2450 / 2470* mm	2640 / 2720* mm
at right arm swing	1740 / 1790* mm	1770 / 1840* mm	1840 / 1910* mm	2010 / 2100* / 2130** mm	2120 / 2130* mm	2150 / 2240* mm
G Maximum digging depth radius	1930 / 1930* mm	2130 / 2130* mm	2070 / 2180* mm	2230 / 2140* / 2120** mm	1960 / 2250* mm	2710 / 2710* mm

\* with long arm

\*\* super long arm





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# Official **App**



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