



High Performance and Durability



Safety

- New ROPS cabin for safer and comfortable operation
- New engine neutral start mechanism

Comfortable cabin

- New air conditioner
- Complete interior
- Operability is improved
- Pressurizing function
- New operator seat

New APC

- Large size liquid crystal display
- Touch screen control
- Rear and side view monitor are available

Environment-friendly

- Environment-friendly and high mileage
- The engine is EU StageV and US EPA Tier4 Final compliant

Operability

- Improvements made for faster cycle time due to the newly adopted hydraulic system
- Operability is improved due to the reduction in operation force.

Maintainability

- Good access to service parts
- Safe features for maintenance
- High output and compact size engine
- Large maintenance space



HD1025-7

Environmental resistance/Operability

High Productivity and Smart Design

1 Environment-friendly and high mileage The engine is EU StageV and US EPA Tier4 Final compliant.



High performance and environment-friendly Yanmar engine

The engine after treatment, DOC, DPF and SCR cuts the PM(Particulate Matter) and NOx(Nitrogen Oxides). The engine is compliant to EU StageV and US EPA Tier4 Final.

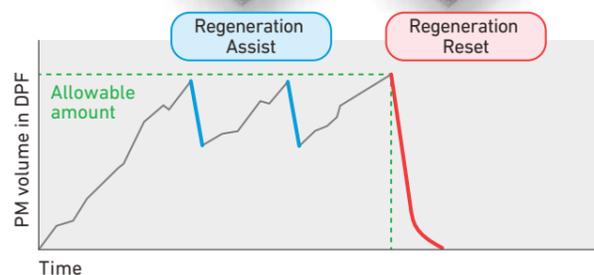
The large capacity DEF (Desel Exhaust Fluid) tank

DEF replenishment is every 1 time per 2 times of fuel replenishment(subject to working condition). DEF tank is located inside of the tool box and easy to access.

DPF regeneration control system

The new 3 step control system makes it possible to have continuous operation without stopping the machine and is very fuel efficient.

DPF temperature distribution
(Image is for illustration purposes)



2 stage turbo charged system

Output performance that accommodates for both heavy duty work and low fuel consumption.

Its equipped with one large and small turbochargers, which enable for the turbochargers to generate sufficient torque from low speed rotation. It also contributes to low fuel consumption and enhances machine life.



The fuel consumption is decreased **12%**
(compared with previous model)

The cycle time is improved by **13%**
(compared with Previous model)



Increase maximum allowable attachment

Compared to previous model

HD1023 III...2830kg
HD1025-7...**3270kg**

Powerful digging force

Bucket digging force	5% UP	Arm digging force	7% UP
HD1023 III...167kN	↘	HD1023 III...120kN	↘
HD1025-7... 176kN		HD1025-7... 128kN	

2 Refurbished hydraulic system for improved operability

New Control Valve

Pressure loss reduction is contributory to low fuel consumption. The add-on valve is now mountable, hence smartly corresponding to the conventional optional equipment that require additional space for certain necessary valves. In addition, KATO has a traditionally fine cut and smoothly refined compatible feeling made by detailed tuning.



New main pump

Contributory to reduction in fuel consumption is the newly mounted efficient main pump. Moreover, a variety of optional equipment can now be accommodated for due to the PTO pump being mountable.



High mileage

Improvement of the hydraulic system includes, adopting a large diameter for piping, reduced pressure loss and minimized energy loss.



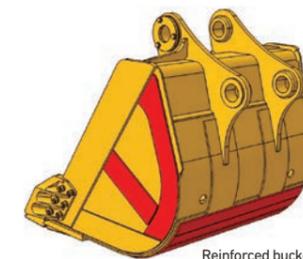
The maximum slewing torque has been increased by 15%

The operation speed is increased by high relief pressure of slewing motor and new hydraulic system.

New counter weight and durable slewing body

Enhanced the counter weight which also increased stability. The thickness of the slewing frame has been increased and also durability has been enhanced.

3 New bucket



Improved Durability

The new plate configuration prevents wear on welded part. The side plates durability have been enhanced and improved. The diameter of the bucket pin and arm boss width have been increased and is also improved in rigidity.

Arm adjustment mechanism

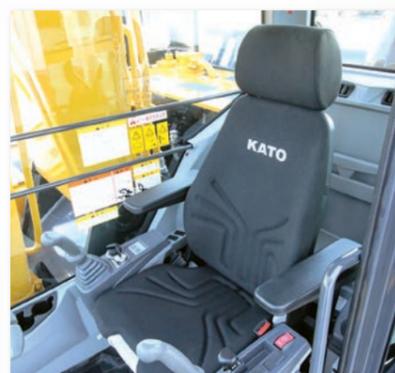
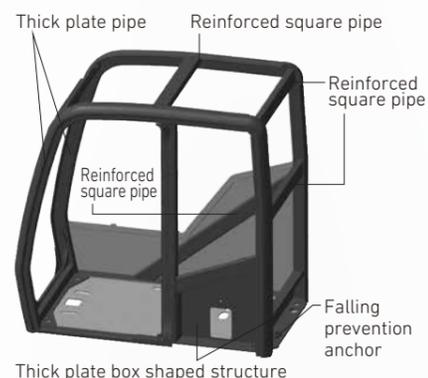
The new mechanism to adjust the rattling of the arm. Easy to adjust by removing the shim.

Reinforced bucket (option)

Bucket bottom reinforcement plates have been provided in horizontal direction. Worn plates are replaceable.

Safer cabin with various features

The KATO original cabin is durable and of smart design. The cabin is compliant with ROPS safety standard (ISO 12117-2). It secures the safety and protection of the operator from roll-over over accident. The cabin is also compliant with ISO 10262 (Top guard level I) and protect the operator from falling objects.



New comfort seat

The new backrest and the new seat suspension reduces long time operation fatigue. The expansion of the reclining angle secures optimum seat position even in break time. Seat heater is available as option.



Safety lock lever

The new electronic control lock mechanism enhances safety and prevents miss operation. It locks the hydraulic circuit in case the console is jumped up. The engine start operation is active only when the lever is applied to lock position.

Other safe features

- Rear view camera
- Emergency engine stop switch
- Emergency escape hammer
- Winding/rewinding seat belt
- Fire wall
- Fan guard
- Retractable side mirror
- LED working light (option)
- Fire extinguisher (option)
- Large size handrail



Polycarbonate door window

Polycarbonate prevents the crack comes from scattering stone. Hard coating which has provided to surface secures high resistance to yellowing or scratch.



Large size step with anti-slip

The large size anti-slip steps make it possible for the operator to access upper structure easier and provides safe maintenance.



Best comfort and high efficiency



Sun shade (option)



One-touch opening and closing front window



One-touch opening and closing door lock



Seat-heater (option)



LED room lamp

Heat& cold insulation box

It is capable of storing 6 drink bottles (500mL).



Rear stowage space

It is capable of storing objects such as 2L size drink bottle. Also wide space for the booklet is available.



New foot rest arrangement

The foot rest has been relocated to optimum position. Replacement of the floor mat has become easier.



Drink holder

Soft material is used for the drink holder. Various arrangements are available.



New operation lever

- Operation switches are arranged to up and bottom. Round shape grip is easy to handle.
- The operating force is decreased by approx.25%



Pressurized cabin

It prevents dust by enhancing the airtightness.

Air conditioner

- Air volume is increased by 26%
- Filter is paper type

Other cabin features

- Seat suspension
- Luggage space
- Helmet hook
- AM/FM radio with 2 speakers
- USB port (option)
- 12V electric port (option)
- Ash tray (option)
- Sun visor (option)
- Rain visor (option)
- Transparent roof hatch (option)
- Seat-heater (option)



Luggage space



USB port (option)

New APC for smart operation



Visibility

Large and high resolution display

The display is 7 inch size and IPS liquid crystal display provides high quality image.

Safety

Rear view camera for standard feature

Operator is able to confirm rear and side view through dual view display (side view camera is an option).



It indicates rear and side view at the same time.

Operability Touch screen control is available for all operation.



Mode selection

Pull-down menu enables operator to confirm all mode on the display at once.



Alarm message

The display indicates various alarms. It also indicates the DEF aqueous fluid replenishing timing.



Attachment Setting

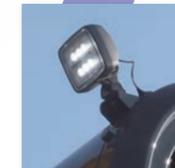
Simple operations to set optimum hydraulic pressure and flow for attachments such as Breakers and Crushers.



Various information

Operator is able to set up to display various information such as maintenance information.

High performance and superior maintenance



LED light (option)

The LED lights have been provided to the cab, right-front and the boom.



Cab maintenance space

It is able to replace the filter for the air conditioner and replenish the washer fluid from the cab maintenance space located outside of the cab.



Equipment layout

Electrical components are centralized in the cab rear.



Battery disconnect switch

In non-operation state, it safely shuts off standby power and this makes maintenance of electronic devices safer.



Swing motor reduction gear

Maintainability has been improved with the remote type supply port.



High performance bush

The dimple design bush keeps the grease longer than before. It prevents the wear and galling.



Engine room

With the high output compact size engine a wide engine maintenance space is secured.



Centralized filter arrangement

Filters are located on the right rear of the machine. It facilitates the replacement work.



Cooling system

The expansion tank (pressurized reserve tank) is located on top of the radiator, with improved air venting to the engine and cool ability.



Storage box

The supply port for the DEF is available and easy to access. It possible to store a 10L DEF container.



Fuel tank

450L large size fuel tank. The remote type water discharge port makes maintenance easier.



Technical Specifications

ENGINE

Model.....YANMAR4TN107FTT
 Type.....4-cycle, water-cooled, in-line, direct injection with turbocharged
 Number of cylinders.....4
 Bore & Stroke.....107 mm × 127 mm
 Total displacement.....4.567 L
 Rated output.....127kW/1,900min⁻¹ (ISO 14396)
 121.6kW/1,900min⁻¹ (ISO 9249 Net)
 Max. torque.....805N·m/1,500min⁻¹ (ISO 14396)
 788N·m/1,500min⁻¹ (ISO 9249 Net)
 Compression ratio.....17.5:1
 Cooling system.....Pressurized coolant circulated by coolant pump with the thermostat and expansion tank
 Lubrication system.....Pressurized oil fed by a gear pump through full-flow and by-pass cartridge filter
 Starter.....Electric, 24V-5.0kW
 Generator.....Alternator, 24V-80A
 Air cleaner.....Double element Dry type filter

HYDRAULIC SYSTEM

Pumps.....Double variable piston pump and gear pump
 Max. discharge flow.....2×266L/min
 Max. discharge pressure.....34.3MPa
 Max. discharge pressure (high power).....36.3MPa
 Oil filtration.....Full-flow filter with replaceable element, a pilot line filter and suction strainer
 Control valves.....5+4 section multiple control valves (with one free service circuit)
 Pilot pump.....Gear type
 Oil cooler.....Finned tube, forced ventilation
 Pressure relief valves.....Primary and secondary on each circuit

SWING SYSTEM

Drive.....Axial piston motor with shockless valve and reduction gear.
 Brake.....A hydraulic brake that locks automatically when the swing control lever is in the neutral position and a mechanical parking brake which is applied when the safety lock lever is pulled backwards, the engine is turned off or the swing control lever is in the neutral position.
 Lubrication.....Completely housed and grease bathed
 Max. swing speed.....12.0min⁻¹

TRAVEL SYSTEM

Drive.....Independent axial piston motor with reduction for each side
 Brakes.....Independent disk parking brake for each side, applied automatically when the travel levers are in the neutral position.
 Track shoes.....47 each side
 51 each side (LC)
 Track adjustment.....Grease cylinders with recoil springs
 Lubrication.....Sealed-for-life rollers and front idlers with floating seals
 Travel speed.....High 0~5.5km/h
 Low 0~3.9km/h
 Gradeability.....70% (35°)
 Max. drawbar pull.....194kN

DIGGING FORCE (ISO 6015)

Bucket digging force.....176kN at high power
 186kN
 Arm (2.96m) digging force.....128kN at high power
 135kN

SERVICE DATA

Fuel tank.....450 L
 Cooling system.....34 L
 Engine oil.....23 L
 DEF tank capacity.....55 L
 replenishment.....46 L
 Track drives.....2×5.3L
 Hydraulic oil tank level.....170L
 system.....340L

CABIN&CONTROLS

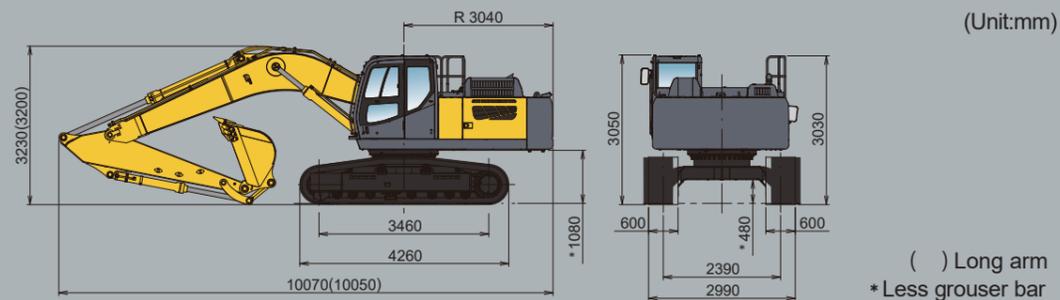
Type.....All weather sound suppressed, cab mounted on 6 point viscous mounting.
 Right hand levers.....Controls the boom & bucket
 Inner right hand lever (with foot pedal).....Controls the right hand track
 Inner left hand lever (with foot pedal).....Controls the left hand track
 Left hand levers.....Controls the arm & swing
 Pilot controls.....Travel, boom, arm, bucket and swing
 Engine throttle.....Electric "Accell dial"
 Meters & gauges.....Hour meter, water temperature, DEF and fuel level
 Working lights.....Provided on the boom left side and right front cover
 Lubrication chart.....Inside of the left rear side cover
 Quick Selection of Working Modes.....
 P: Professional mode for the experienced operator. Established both power and good response
 A: All-round multipurpose Mode for all application from precision work to heavy duty work by stroke of operation levers
 E: ECO Mode for economical works
 Color monitor display with touch screen
 Rear / side View monitor

AIR CONDITIONER

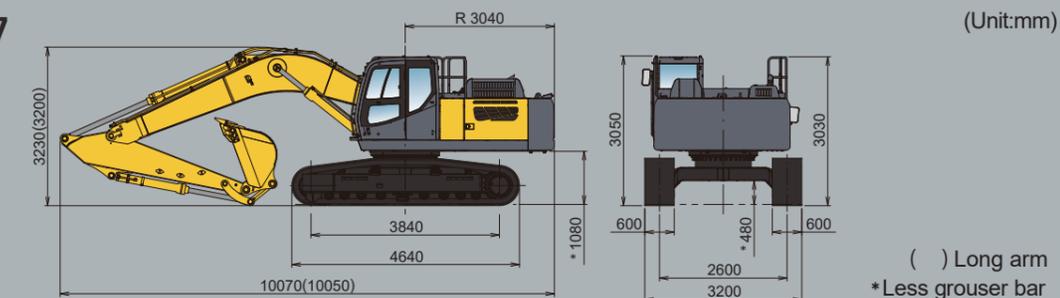
Air conditioner gas contains fluorinated greenhouse gases.
 Industrial designation.....HFC-134a
 Quantity.....1.0kg
 CO₂ equivalent.....1.43ton
 Global warming potential (GWP).....1430

Dimensions

HD1025-7



HD1025LC-7

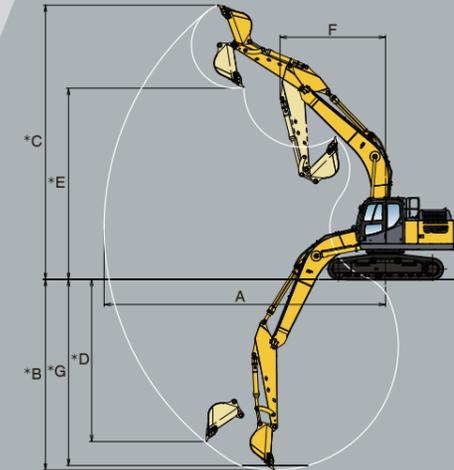


Working Ranges

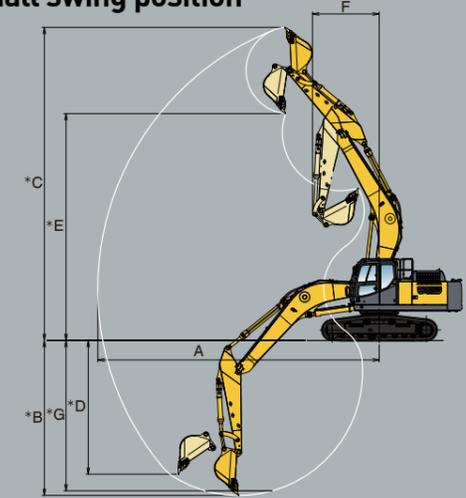


HD1025-7
 Specs

Standard backhoe



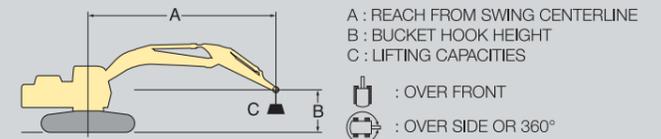
Small swing position



Unit : mm *Less grouser bar

Range	Arm	Standard boom		Small swing position	
		Standard arm 2.96m	Long arm 3.56m	Standard arm 2.96m	Long arm 3.56m
A : Maximum digging radius		10,340	10,910	10,340	10,910
* B : Maximum digging depth		7,000	7,610	6,590	6,300
* C : Maximum digging height		10,080	10,370	11,500	11,940
* D : Maximum vertical wall		5,960	6,590	4,910	5,520
* E : Maximum dumping height		7,030	7,310	8,340	8,770
F : Minimum swing radius		3,880	3,810	2,450	2,540
* G : Maximum digging depth at 2,440mm (8ft) floor length		6,830	7,460	5,530	6,150

Lifting Capacities



HD1025-7

BOOM: 5.88 m, ARM: 2.96 m, SHOE WIDTH: 600mm, COUNTERWEIGHT: 5,300 kg

Unit: kg

LIFT POINT HEIGHT B(m)	LIFT POINT RADIUS A(m)										AT MAXIMUM LIFT POINT RADIUS				
	1.50		3.00		4.50		6.00		7.50		RADIUS (m)				
	☺	☻	☺	☻	☺	☻	☺	☻	☺	☻					
7.50							*5,600	*5,600			*5,440	*5,440	6.71		
6.00							*5,710	*5,710	4,620		*5,050	4,370	7.73		
4.50							*6,520	6,440	*6,150	4,530	*4,940	3,770	8.36		
3.00							*9,960	9,220	*7,700	6,070	6,070	4,370	4,820	3,470	8.69
1.50							*12,270	8,540	8,170	5,730	5,880	4,190	4,690	3,360	8.74
0.00							12,360	8,200	7,920	5,500	5,740	4,070	4,800	3,420	8.53
-1.50	*6,800	*6,800	*11,380	*11,380	12,270	8,120	7,820	5,410	5,700	4,030	5,210	3,700	8.04		
-3.00	*12,880	*12,880	*19,120	16,030	12,380	8,210	7,880	5,470			6,130	4,340	7.20		
-4.50			*16,210	*16,210	*11,470	8,510					*8,230	5,920	5.87		

HD1025LC-7

BOOM: 5.88 m, ARM: 2.96 m, SHOE WIDTH: 600mm, COUNTERWEIGHT: 5,300 kg

Unit: kg

LIFT POINT HEIGHT B(m)	LIFT POINT RADIUS A(m)										AT MAXIMUM LIFT POINT RADIUS				
	1.50		3.00		4.50		6.00		7.50		RADIUS (m)				
	☺	☻	☺	☻	☺	☻	☺	☻	☺	☻					
7.50							*5,600	*5,600			*5,440	*5,440	6.71		
6.00							*5,710	*5,710	*5,950	5,130	*5,050	4,850	7.73		
4.50							*6,520	*6,520	*6,150	5,040	*4,940	4,200	8.36		
3.00							*9,960	*9,960	*7,700	6,770	*6,710	4,870	5,010	3,870	8.69
1.50							*12,270	9,660	*8,920	6,430	6,870	4,690	*5,260	3,760	8.74
0.00							*13,570	9,310	9,360	6,190	6,730	4,560	5,600	3,840	8.53
-1.50	*6,800	*6,800	*11,380	*11,380	*13,890	9,220	9,260	6,100	6,680	4,520	6,090	4,150	8.04		
-3.00	*12,880	*12,880	*19,120	18,670	*13,320	9,320	9,320	6,150			7,180	4,870	7.20		
-4.50			*16,210	*16,210	*11,470	9,630					*8,230	6,640	5.87		

NOTE : 1. Lifting capacities are based on ISO 10567.
 2. Lifting capacities shown do not exceed 87% of machine hydraulic capacity or 75% of minimum tipping load.
 3. Capacities marked with an asterisk (*) are limited by hydraulic capacities.
 4. Lifting capacities are based on machine standing on firm, uniform supporting surface. User must make allowances for job conditions such as soft or uneven ground.
 5. Lifting capacities shown should not be exceeded. Weight of all lifting accessories must be deducted from the above lifting capacities.
 6. Capacities apply only to the machine as originally manufactured and equipped by KATO WORKS CO., LTD.
 7. The operator should be fully acquainted with the instruction manual before operating the machine.