

STANDARD AND OPTINAL EQUIPMENTS

● Safety equipments

	STD	LC
ISO12117-2 (Fops top guard ISO 10262 LEVEL I)	●	●
Safety lock lever	●	●
Seat-belt	●	●
Emergency engine stop switch	●	●
Emergency escape hammer	●	●
Rear view mirror (light&left side)	●	●
Rear view camera	●	●
Side view camera	●	●
Working light (slewing table right side,boom left side)	●	●
Optional working light (cab left and right side)	●	●
Optional working light (boom right side)	●	●
LED working lights	●	●
Boom/arm anti-drift valve	●	●
Slewing anti-counter action	●	●
Automatic parking brake (slewing table)	●	●
Automatic parking brake (traveling)	●	●
Fire wall	●	●
Falling prevention handrail	●	●
Battery disconnect switch	●	●
Caution indication	●	●
Cabin lower guard	●	●
Cabin front guard	●	●
Cabin head guard	●	●
Step on side of cab	●	●
Fire extinguisher	●	●
Additional electric horn	●	●
Traveling alarm	●	●
Swing interlocking warning lamp	●	●
Loud speaker	●	●

● System

	STD	LC
APC mode (A, P and E)	●	●
Front attachment mode	●	●
Auto-slow, one touch slow	●	●
Automatic transmission for traveling	●	●
2 speed modes for traveling	●	●

● Cabin

	STD	LC
6 points viscous dumping cab suspension	●	●
Pull up front window	●	●
7 inch touch screen control LCD monitor	●	●
Double slide operator seat	●	●
Seat suspension adjustable to operator's weight	●	●
Automatic air conditioner (pressurized)	●	●
Defroster	●	●
Large capacity heat & cold insulation box	●	●
Intermitted windshield wiper	●	●
AM/FM radio	●	●
Two stereo speakers	●	●
LED interior light	●	●
Cup holder	●	●
Helmet hook	●	●
24 V electric supply port	●	●
Transparent roof hatch with sun visor	●	●
Sun shade	●	●
Sun visor	●	●
Rain visor	●	●
Ash tray (with cup holder)	●	●
12V electric supply port	●	●
USB port (x2)	●	●
Seat cover	●	●

● Piping and other

	STD	LC
Service port (1 spool)	●	●
High performance filter	●	●
Additional piping for breaker & crusher (with electric control selector valve)	●	●
Additional piping (for crusher)	●	●
Additional piping (for rotator)	●	●
Control pattern change valve.(ISO-SAE)	●	●
Air cleaner double element	●	●
Under cover slewing table (reinforced)	●	●
Electric refueling pump	●	●
Specification for cold region	●	●
Designated paint	●	●
Tool set	●	●

● Working equipments




	STD	LC
Bucket	0.45m³ bucket	●
	0.55m³ bucket	●
	0.80m³ bucket	●
	0.90m³ bucket	●
	1.00m³ bucket	●
	1.10m³ bucket	●
Arm	0.80m³ reinforced bucket	●
	0.90m³ reinforced bucket	●
	Arm (2.93m)	●
	Arm (3.92m)	●
	Various type of reinforced arm	●
Boom	Standard boom (5.63m)	●
	Reinforced boom (5.63m)	●
	Bracket on boom for small swing radius (5.63m)	●
	Standard side link	●
Link	Reinforced side link	●

● Traveling equipments

	STD	LC
Grouser shoe	600mm	●
	700mm	●
	800mm	●
	900mm	●
Cover on the bottom face of traveling frame	●	●
Traveling motor cover (reinforced)	●	●
Track guard	1 pc each side	●
	2 pcs each side	●
	3 pcs each side	●


● Standard equipments ● Option —No setting

BUCKET

Type of bucket		Backhoe bucket					
Bucket capacity m³, ISO		0.45	0.55	0.80	0.90	1.00	1.10
Bucket width	W/O side cutters, mm	650	800	1,020	1,190	1,270	1,400
	with side cutters, mm	760	910	1,130	1,300	1,380	—
Number of bucket teeth		4	4	5	5	6	6
Shape of bucket							
Standard boom +	Standard arm (2.93m)	●	●	●	●	▲ [●]	□
	Long arm (3.92m)	●	●	▲	× [▲]	×	×

● General purpose ▲ Light work □ Loading × Unusable [] HD823MRLC-7
○ Pink colored area means standard.

TRACK SHOES

Type of shoes		Grouser shoe			
					
Shoe width	mm	600	700	800	900
Operating weight	kg	23,000 [23,700]	23,400 [24,000]	23,700 [24,300]	23,900 [24,600]
	mm	2,820 [2,990]	2,920 [3,090]	3,020 [3,190]	3,120 [3,290]
Distance between shoe edge of both side	mm	2,820 [2,990]	2,920 [3,090]	3,020 [3,190]	3,120 [3,290]
	mm	2,820 [2,990]	2,920 [3,090]	3,020 [3,190]	3,120 [3,290]
Ground pressure	kPa	51 [49]	45 [43]	40 [38]	36 [34]
	kgf/cm²	0.52 [0.50]	0.46 [0.43]	0.40 [0.38]	0.36 [0.34]

Ground pressure when equip standard bucket and arm.

[] HD823MRLC-7
○ Pink colored area means standard.

<http://www.kato-works.co.jp>

NOTE : Illustrations may include optional equipment. KATO products and specifications are subject to improvements and changes without notice. Mentioned figures are approximate.

● Contact for enquiry:

KATO

QUALITY & EXPERIENCE
SINCE 1895

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High performance & Environment friendly KATO compact tail excavator

Complete operation

- New hydraulic system increases the cycle time
- Lever operation burden has reduced

Maintainability

- Good access to service parts
- Daily cleaning has been facilitated
- Safe features for maintenance

Safety

- New ROPS cabin
- New engine neutral start mechanism

Comfortable cabin

- New air conditioner
- Complete interior
- Operability is up
- Pressurizing function

New APC

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

Environment-friendly

- US EPA Tier 4 and EU StageIV compliant engine
- New control valve reduces the fuel consumption



High productivity and comfort operability

1 High performance and environment-friendly Isuzu engine



Selective Catalytic Reduction (SCR) system

The SCR system cuts the NO_x (nitrogen oxides), PM (particulate matter) and NMHC (non-methane hydrocarbon). The emission control is compliant with Stage4 and Tier4.

EGR (Exhaust Gas Recirculation) system

The large capacity water-cooled EGR cooler suppresses the NO_x.

Digging force

Max. bucket digging force.....	150kN
at high power.....	159kN
Max. arm digging force.....	109kN
at high power.....	115kN

Working range

Max. digging radius.....	9,930mm
Max. digging depth.....	6,690mm
(STD position)	
Max. digging depth.....	5,260mm
(optional small swing position)	
Max. digging height.....	9,840mm
(STD position)	
Max. digging height.....	11,330mm
(optional small swing position)	

Cycle time is increased by

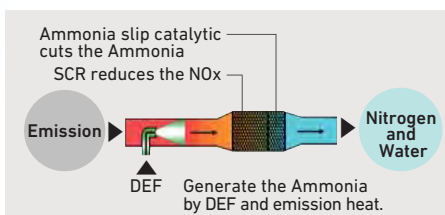
9% (compared with HD823MR-6 at P mode)

2 Selective Catalytic Reduction (SCR) system

The SCR system provides chemical reaction between Urea and NO_x in emission. This reaction generates Nitrogen and Water which are friendly to environment.

The large capacity DEF (Desel Exhaust Fluid) tank

DEF replenishment is every 1 time per 3 times of fuel replenishment (subject to working condition).



3 New hydraulic system design

New control valve

The internal mechanism of the control valve has been facilitated. It reduces the pressure loss and supports the low fuel consumption operation. The additional valve can be attached and optional operations are available.



New main pump

The new main pump reduces the fuel consumption. The PTO pump can be installed which allows optional operation.



Large size hydraulic hose and pipe

The hose and pipe of the boom and arm cylinders have increased. It reduces pressure loss and increases the productivity.



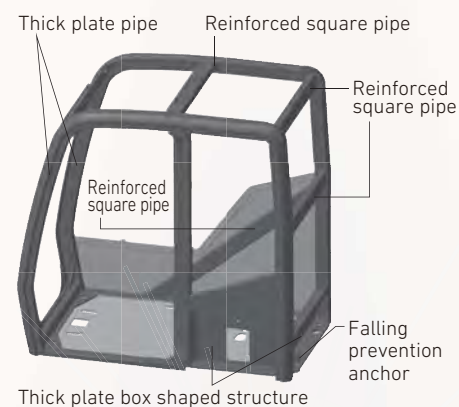
Smooth operation

The operation burden has decreased by approximately 25% and easy to operate.



Safer cab with various features

The KATO original cabin is durable and smart design. The cabin is compliant with ROPS direction (ISO12117-2). It secures the safety and protection of the operator from roll-over accident. The cabin is also compliant with ISO 10262 (Top guard level I) and protect the operator from falling objects.



Window and rise up wiper

The large size right window and the rise up wiper secure excellent view. The wiper is storable to the right pillar.



Polycarbonate door window

Polycarbonate prevents the crack arise from scattering stone. Hard coating secures high resistance to yellowing or scratch of surface.



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
- Side view camera (option)
- Emergency engine stop switch
- Emergency escape hammer
- Seat belt
- Fire proof wall
- Fan guard
- Retractable side mirror
- LED working light (option)
- Fire extinguisher (option)



Best comfort and high efficiency



Heat&cold insulation box

It is capable to store 6 drink bottles (500ml).



Rear stowage space

It is capable to stow objects such as 2l size drink bottle.



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 control.



Cabin pressurization

It prevents dust by enhancing the airtightness.

Air conditioner

- Air volume is increased by 26%
- Paper type filter

Other cabin features

- Seat suspension with large size shock absorber
- 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)



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 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.



Air conditioner

The air conditioner operation is available on the display.



Various information

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

High performance and superior maintenance



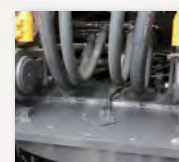
Facilitated the layout

The electronic items and air cleaner are located in the rear cabin compartment. It has facilitated and become compact.



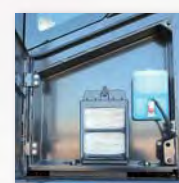
Filters

The filters are concentrated on the right-rear location which is easy to access. The cartridge type main fuel filter is easy to replace.



Greasing port

It adopts greasing port for the slewing motor. The greasing port location is easy to access.



Cabin maintenance space

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



High performance bush

The new dimple design bush keeps the grease longer than before. It has been provided to boom foot, arm foot and arm top.



Tool box

The tool box for daily maintenance.



Cooling system

The expansion tank has been installed to the radiator top. It increases air breeding performance and cooling performance.



DEF tank

The DEF tank is easy to access.



Battery disconnect switch

It is capable to shut down the battery completely in non-operation state. The maintenance of electronic devices becomes safer.

Technical Specifications

ENGINE

Model..... ISUZU4HK1X
4 cycle intercooler turbo
charged diesel engine
Number of cylinders..... 4
Bore & Stroke..... 115 mm × 125 mm
Total displacement..... 5.193 L
Rated output..... 128.4kW/2,000min⁻¹
(ISO 14396)
120.5kW/2,000min⁻¹
(ISO 9249 Net)
Max. torque..... 670N·m/1,600min⁻¹
(ISO 14396)
646N·m/1,600min⁻¹
(ISO 9249 Net)
Compression ratio..... 16.5:1
Combustion system..... Direct injection
Cooling system..... Pressurized water
circulated by a
Impeller type pump
with thermostat
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-50A
Air cleaner..... Double element Dry type filter

HYDRAULIC SYSTEM

Pumps..... Double variable piston pump
and gear pump
Max. discharge flow..... 2×248L/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..... 14.0min⁻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..... 46 each side
49 each side (LC)
Track adjustment..... Grease cylinders
with recoil springs
Lubrication..... Sealed-for-life rollers and
front idlers with floating seals
Travel speed..... High 0~5.9km/h
Low 0~3.9km/h
Gradeability..... 70% (35°)
Max. drawbar pull..... 184 kN

DIGGING FORCE (ISO 6015)

Bucket digging force..... 150kN
at high power..... 159kN
Arm (2.93m) digging force..... 109kN
at high power..... 115kN

SERVICE DATA

Fuel tank..... 325 L
Cooling system..... 40 L
Engine oil..... 26 L
DEF tank
capacity..... 55 L
replenishment..... 46 L
Track drives..... 2×5.0L
Hydraulic oil tank
level..... 150 L
system..... 270 L
In standard figure, with the 2.93m arm,
600mm grouser shoes and 0.80m³ (ISO)
bucket.
Operating weight..... 23,000 kg
Ground pressure..... 51 kPa

CAB&CONTROLS

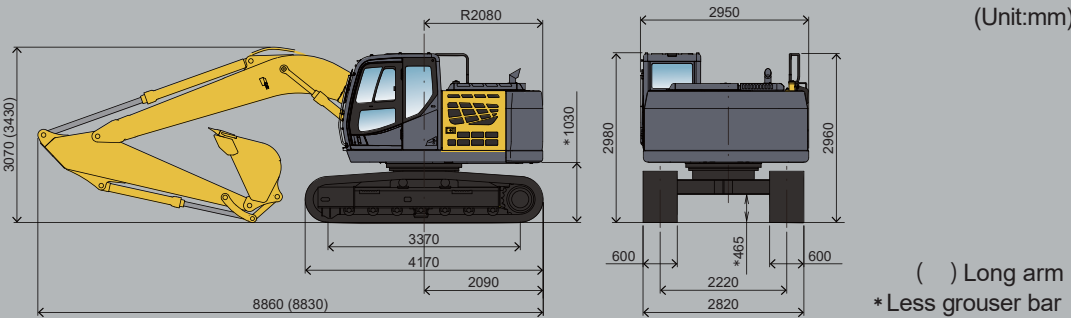
Type..... All weather sound suppressed,
cab mounted on 6 point
viscous mounting.
Right hand levers..... Controls the boom &
bucket
Inner right hand lever
(with foot pedal)..... Controls the right
hand track
Inner left hand lever
(with foot pedal)..... Controls the left hand
track
Left hand lever..... Controls the arm & swing
Pilot control..... Travel, boom, arm, bucket
and swing
Engine throttle..... Electric "Accell dial"
Meter & 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 right front
side cover
Quick Selection of Working Modes.....
P: Professional mode for experienced
operator. Established both power and
good response
A: All-round Multi Purpose 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

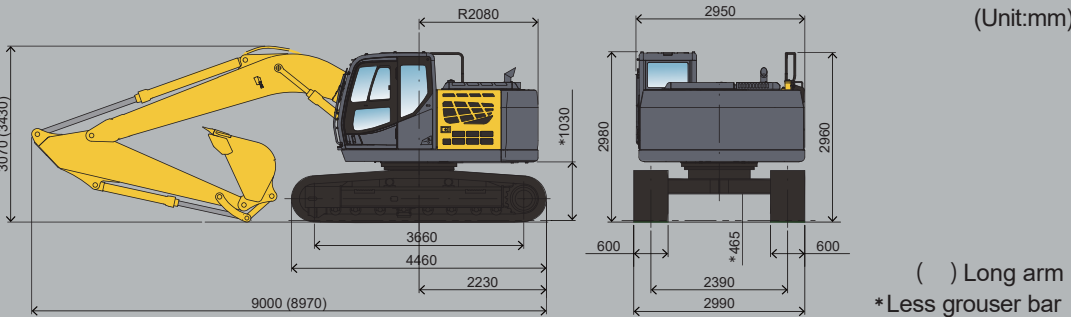
Air conditioner gas contains fluorinated
greenhouse gases.
Industrial designation..... HFC-134a
Quantity..... 1.0kg
CO₂ equivalent..... 1.43ton
Global warming potential (GWP)..... 1430

Dimensions

HD823MR-7



HD823MRLC-7

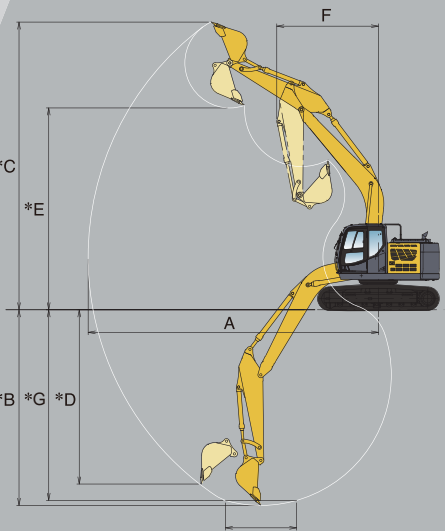


Working Ranges

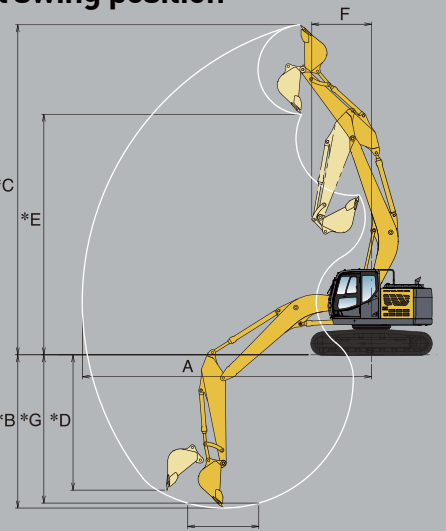


HD823MR-7
Specs

Standard backhoe

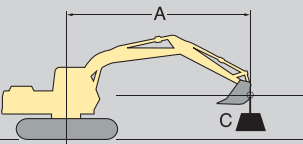


Small swing position



Unit : mm *Less grouser bar

Range	Arm	Standard boom		Bracket on boom for small swing radius (option)	
		Standard arm 2.93m	Long arm 3.92m	Standard arm 2.93m	Long arm 3.92m
A : Maximum digging radius		9,930	10,870	9,930	10,870
* B : Maximum digging depth		6,690	7,690	5,260	6,260
* C : Maximum digging height		9,840	10,400	11,330	12,140
* D : Maximum vertical wall		5,960	7,080	4,650	5,650
* E : Maximum dumping height		6,900	7,440	8,260	9,070
F : Minimum swing radius		3,480	3,380	2,050	2,310
* G : Maximum digging depth at 2,440mm (8ft) floor length		6,520	7,550	5,090	6,120



A : REACH FROM SWING CENTERLINE
B : BUCKET HOOK HEIGHT
C : LIFTING CAPACITIES
: OVER FRONT
: OVER SIDE OR 360°

Lifting Capacities

HD823MR-7 BOOM: 5.63 m, ARM: 2.93 m, BUCKET: 0.8m³ (650kg), SHOE WIDTH: 600mm, COUNTERWEIGHT: 6,100kg 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	9.00	10.50	12.00	13.50	15.00	RADIUS (m)		
7.50						*3650	*3650				*3580	*3580	6.11
6.00						*4030	*4030				*3020	*3020	7.46
4.50						*4610	4590	*4470	3090		*3010	2650	8.12
3.00			*5480	*5480	*6930	6810	*5540	4310	4600	2960	*3150	2370	8.47
1.50			*4960	*4960	*5680	*5680	6350	4030	4450	2820	*3430	2260	8.54
0.00			*5200	*5200	*5120	*5120	6120	3810	4320	2710	3660	2280	8.35
-1.50	*6530	*6530	*5080	*5080	*5050	*5050	6000	3710	4270	2660	3990	2490	7.86
-3.00	*5660	*5660	*4910	*4910	*5190	*5190	6020	3730			4760	2980	7.02
-4.50			*4930	*4930	*5760	*5760					6760	4230	5.68

HD823MRLC-7 BOOM: 5.63 m, ARM: 2.93 m, BUCKET: 0.8m³ (650kg), SHOE WIDTH: 600mm, COUNTERWEIGHT: 6,100kg 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	9.00	10.50	12.00	13.50	15.00	RADIUS (m)		
7.50						*3650	*3650				*3580	*3580	6.11
6.00						*4030	*4030				*3020	*3020	7.46
4.50						*4610	*4610	*4470	3490		*3010	3000	8.12
3.00			*5480	*5480	*6930	*6930	*5540	4860	*4910	3360	*3150	2700	8.47
1.50			*4960	*4960	*5680	*5680	*6570	4570	5200	3220	*3430	2590	8.54
0.00			*5200	*5200	*5120	*5120	*7140	4350	5080	3100	*3930	2630	8.35
-1.50	*6530	*6530	*5080	*5080	*5050	*5050	*6710	4250	5030	3050	4690	2850	7.86
-3.00	*5660	*5660	*4910	*4910	*5190	*5190	7100	4260			5600	3410	7.02
-4.50			*4930	*4930	*5760	*5760					*6980	4810	5.68

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.