

Innovations For The Future

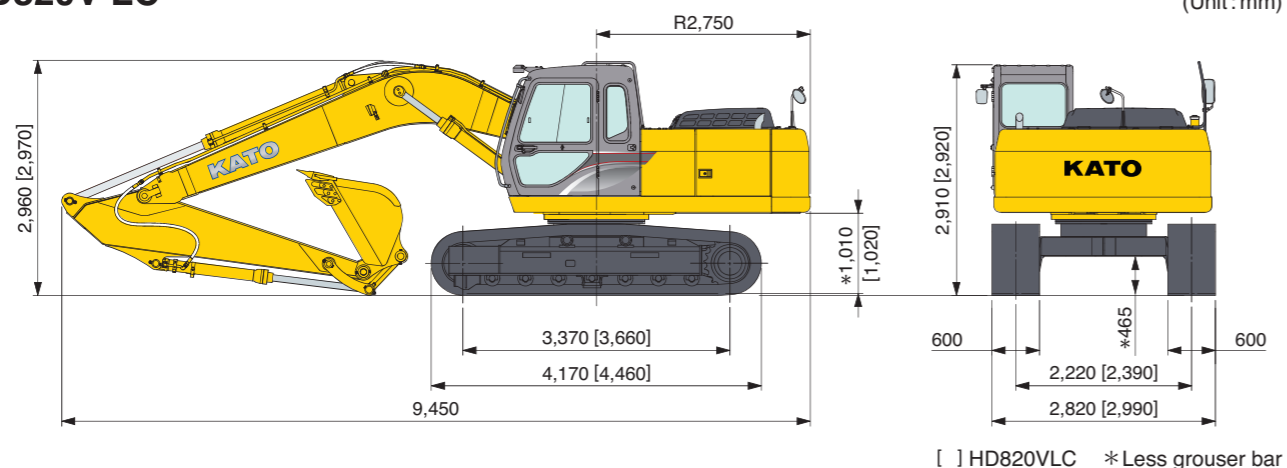
Eco & Tough



Dimensions

HD820V
HD820V LC

(Unit: mm)



[] HD820VLC *Less grouser bar

Address inquiries to :

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



KATO

QUALITY & EXPERIENCE
SINCE 1895

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KATO

REGZM

FULLY HYDRAULIC EXCAVATOR

HD820v

Bucket capacity: 0.45m³-1.1m³(ISO)

Engine output: 112.5kW/2,000min⁻¹(ISO Net)

Operating weight: 19,900kg (HD820V)

20,700kg (HD820VLC)



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動

REGZM

HD820v

*It is a word of ACTIVE MACHINE
with 5 essential design features*

- User friendly design
- Environmentally cautious design
- Lower fuel consumption
- Powerful Operation
- Robotic shape design



Equipments



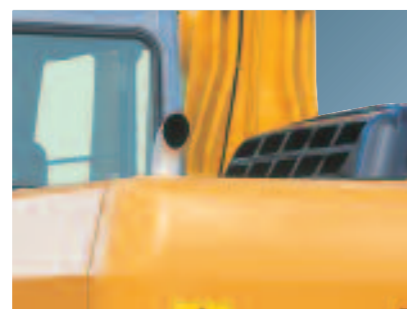
New Display APC200

PROMINENT FEATURES



Powerfull Operation

Increase in operating hydraulic pressure to 34.3MPa [350kgf/cm²]
Digging Force: **9%** up
Reinforcement of boom & arm
Increased Strength by **17%**



Advanced Noize Emission Control

Lower noise emission control adopting low noise exhaust muffler and advanced low noise hydraulic system offers fatigue-free and safer operation. Low noise means low energy-loss machine. Noise Level (Sound Power Level):99dB



Responsible Emission Control and Lower Fuel Consumption

Mitsubishi 4M50-TLE3A
112.5kW/2,000min⁻¹
Fuel consumption might be competitive among the same size of excavators based on our internal testing.

Technical Specifications

ENGINE

Model.....Mitsubishi 4M50-TLE3A, 4 cycle intercooler turbo charged diesel engine
Number of cylinders..... 4
Bore & Stroke..... 114mm×120mm
Total displacement..... 4.9 L
Rated output..... 112.5kW/2,000min⁻¹ (ISO Net)
Max. torque.....564N·m/1,600min⁻¹ (ISO Net)
Compression ratio.....17.5:1
Combustion system..... Direct injection
Specific fuel consumption... 227g/kW-hour
Cooling system.....Pressurized water circulated by a centrifugal pump with thermostat
Lubrication system.....Pressurized oil fed by a gear pump through full-flow and by-pass cartridge filter
Starter.....Electric, 24V-5kW
Generator..... Alternator, 24V-50A
Fuel Injection system... Electronic control common rail type
Air cleaner..... Dry type filter

HYDRAULIC SYSTEM

Pumps.....Double variable piston pump and gear pump
Max. discharge flow..... 2×235L/min
Max. discharge pressure..... 34.3MPa
Max. discharge pressure (High power)..... 36.3MPa
Oil filtration... Full-flow filter with replaceable element, drain cartridge filter, 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

CAB & CONTROLS

Type.....All weather sound suppressed, 1,000mm wide pressed steel cab mounted on 6 point viscouse 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 and fuel level
Indicator lamps... Engine diagnosys lamp
Working lights.....Provided on the boom left side and mounted on the frame
Lubrication chart..... Battery cover

APC200

- Quick Selection of Working Modes
P: Professional Mode for heavy duty application (H Mode)
A: All-around 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 back up light
- Engine oil pressure
- Engine oil filter
- Hydraulic oil filter
- Engine Preheater
- Hydraulic oil temperature
- Water temperature
- Water level
- Fuel level
- ECU monitor
- Battery charge
- APC monitor and air cleaner
- Fuel water level
- Calendar

BOOM, ARM AND BUCKET

Boom cylinders..... Two, double acting
Bore & Stroke..... 125mm×1,315mm
Arm cylinder..... One, double acting
Bore & Stroke..... 135mm×1,630mm
Bucket cylinder..... One, double acting
Bore & Stroke..... 120mm×1,090mm
Lubrication..... Grease nipples, with centralized greasing for remote points
Bucket digging force..... 150kN
(High power)..... 159kN
Arm digging force..... 109kN
(High power)..... 115kN
Note: High power can be used with STD arm and short arm.

SWING SYSTEM

Drive..... Axial piston motor with shock-less 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.....13.5min⁻¹
Tail swing radius..... 2,750mm
Min. front swing radius..... 3,460mm

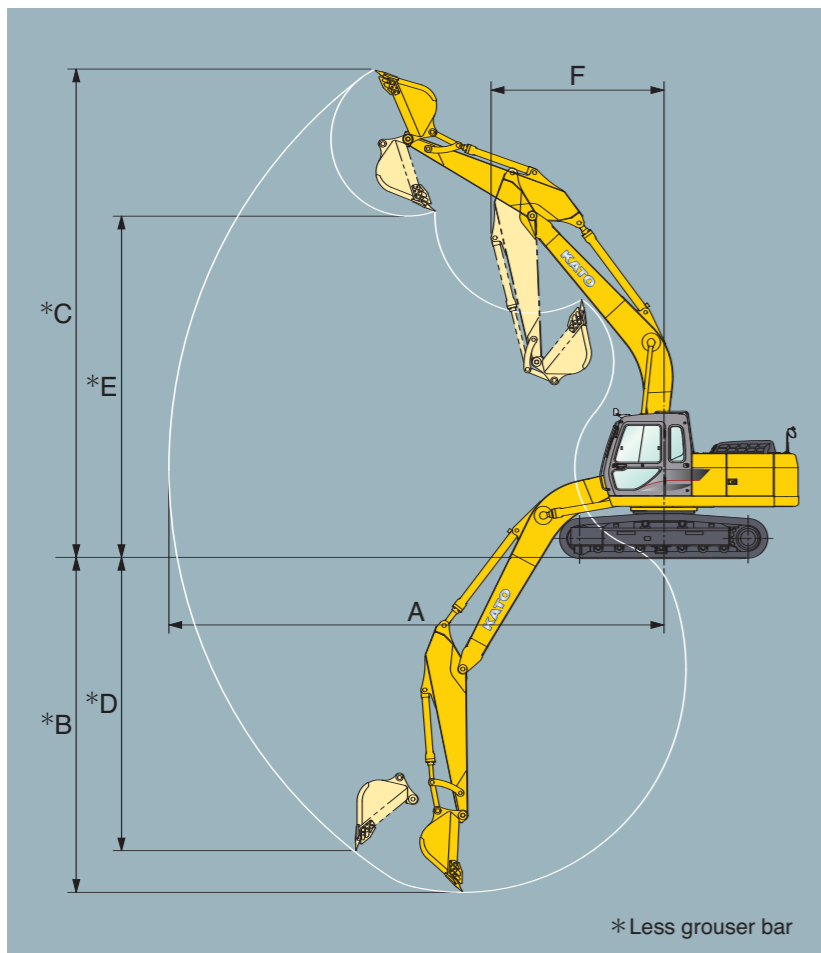
TRAVEL SYSTEM

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 HD820V
49 each side HD820VLC
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 0~3.6km/h
Gradeability..... 70% (35°)
Max. drawbar pull..... 185kN
Ground clearance..... 465mm (less grouser bar)
Track length.....4,170mm HD820V
4,460mm HD820VLC

SERVICE DATA

Fuel tank..... 420 L
Cooling system..... 25 L
Engine oil..... 20.5 L
Track drives..... 2×5 L
Swing drive..... 5 L
Hydraulic oil tank (level)..... 165 L (system).....260 L
In standard figure, with the 2.93m arm, 600mm grouser shoes and 0.8m³ (HD820VLC: 0.9m³)ISO, bucket.
Operating weight.....19,900kg: HD820V
20,700kg: HD820VLC
Ground pressure..... 45Pa: HD820V
43Pa: HD820VLC

Working Ranges



Range	Arm	Short Arm 2.43m	STD Arm 2.93m	Long Arm 3.92m
A : Max. digging radius		9,470	9,910	10,840
*B : Max. digging depth		6,210 [6,200]	6,700 [6,690]	7,700 [7,690]
*C : Max. digging height		9,550 [9,560]	9,760 [9,770]	10,300 [10,310]
*D : Max. vertical wall		5,350 [5,340]	5,870 [5,860]	7,060 [7,050]
*E : Max. dumping height		6,620 [6,630]	6,830 [6,840]	7,340 [7,350]
F : Min. swing radius		3,580	3,460	3,400

Unit : mm
[] HD820VLC

Bucket

Type of bucket	Backhoe bucket						Dredging bucket	Slope forming bucket
Bucket capacity m ³ , ISO	0.45	0.55	0.80	0.90	1.00	1.10	0.65	—
Bucket width	W/O side cutters, mm	650	800	1,020	1,190	1,270	1,400	2,400
	with side cutters, mm	760	910	1,130	1,300	1,380	—	2,000
Standard boom +	Short arm	●	●	●	●	▲ [●]	□	●
	Standard arm	●	●	●	●	▲ [●]	□	●
	Long arm	●	●	▲	▲	×	×	▲

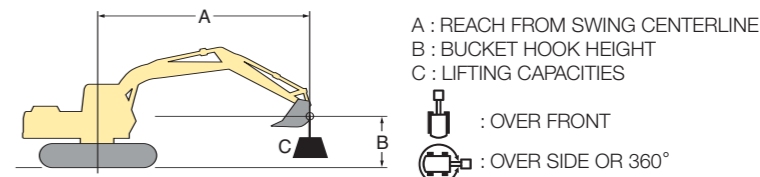
● General purpose ▲ Light work □ Loading ○ Usable × Unusable — No setting
 ○ Yellow colored area means standard.
 (HD820V 0.8m³, HD820VLC 0.9m³) [] HD820VLC

Track Shoes

Type of bucket	Grouser shoe				Flat shoe	Triangle shoe
Shoe width mm	600	700	800	900	600	800
Overall width mm	2,820 [2,990]	2,920 [3,090]	3,020 [3,190]	3,120 [3,290]	2,820 [2,990]	3,020 [3,190]
Ground pressure (kPa)	45 [43]	39 [38]	35 [33]	31 [30]	47 [45]	36 [34]

○ Yellow colored area means standard. [] HD820VLC

Lifting Capacities



HD820V BOOM: 5.63m, ARM: 2.93m, BUCKET: 0.8m³ (640kg), SHOE WIDTH: 600mm, COUNTERWEIGHT: 4,200kg Unit: 1,000kg

LIFT POINT HEIGHT B (m)	LIFT POINT RADIUS A (m)												AT MAXIMUM LIFT POINT RADIUS					
	2.00		3.00		4.00		5.00		6.00		7.00		8.00		RADIUS (m)			
7.00	○	⊗								*3.98	*3.98					*3.27	*3.27	6.72
6.00										*4.05	*4.05	*4.05	3.27			*3.17	2.92	7.40
5.00										*4.38	4.25	*4.38	3.21			*3.16	2.54	7.89
4.00								*5.30	*5.30	*4.91	4.09	*4.68	3.12	3.73	2.42	*3.21	2.29	8.22
3.00			*5.54	*5.54	*7.19	*7.19	*6.34	5.25	*5.56	3.90	4.61	3.01	3.66	2.36	*3.32	2.13	8.43	
2.00			*4.89	*4.89	*5.54	*5.54	*7.17	4.93	5.77	3.71	4.48	2.88	3.58	2.29	3.21	2.04	8.51	
1.00			*5.09	*5.09	*5.04	*5.04	*6.01	4.67	5.58	3.54	4.36	2.77	3.51	2.22	3.19	2.00	8.48	
0.00	*3.34	*3.34	*5.21	*5.21	*4.92	*4.92	*5.54	4.49	5.43	3.41	4.26	2.69	3.45	2.17	3.24	2.03	8.32	
-1.00	*6.01	*6.01	*5.15	*5.15	*4.90	*4.90	*5.38	4.38	5.34	3.33	4.20	2.63	3.42	2.14	3.40	2.13	8.03	
-2.00	*5.86	*5.86	*5.02	*5.02	*4.92	*4.92	*5.39	4.35	5.31	3.30	4.19	2.62			3.70	2.32	7.61	
-3.00	*5.31	*5.31	*4.92	*4.92	*4.97	*4.97	*5.56	4.38	5.33	3.32	4.23	2.66			4.22	2.65	7.01	
-4.00	*5.00	*5.00	*4.89	*4.89	*5.14	*5.14	*6.00	4.47	5.44	3.42					5.19	3.27	6.19	
-5.00			*5.03	*5.03	*5.59	*5.59	*7.30	4.67							7.38	4.61	5.05	

HD820VLC BOOM: 5.63m, ARM: 2.93m, BUCKET: 0.9m³ (710kg), SHOE WIDTH: 600mm, COUNTERWEIGHT: 4,200kg Unit: 1,000kg

LIFT POINT HEIGHT B (m)	LIFT POINT RADIUS A (m)												AT MAXIMUM LIFT POINT RADIUS					
	2.00		3.00		4.00		5.00		6.00		7.00		8.00		RADIUS (m)			
7.00	○	⊗								*3.92	*3.92					*3.21	*3.21	6.72
6.00										*4.00	*4.00	*4.00	3.56			*3.12	*3.12	7.40
5.00										*4.33	*4.33	*4.32	3.51			*3.11	2.78	7.89
4.00							*5.24	*5.24	*4.86	4.48	*4.63	3.42	*3.89	2.66	*3.16	2.51	8.22	
3.00			*5.47	*5.47	*7.09	*7.09	*6.29	5.77	*5.51	4.29	*5.04	3.30	4.14	2.59	*3.27	2.34	8.43	
2.00			*4.84	*4.84	*5.46	*5.46	*7.07	5.45	*6.21	4.09	5.09	3.18	4.06	2.52	*3.46	2.25	8.51	
1.00			*5.05	*5.05	*4.98	*4.98	*5.92	5.18	6.39	3.92	4.97	3.06	3.99	2.45	3.62	2.21	8.48	
0.00	*3.28	*3.28	*5.18	*5.18	*4.87	*4.87	*5.47	5.00	6.24	3.78	4.87	2.98	3.93	2.40	3.69	2.25	8.32	
-1.00	*5.95	*5.95	*5.11	*5.11	*4.85	*4.85	*5.31	4.89	6.14	3.70	4.81	2.92	3.91	2.37	3.88	2.36	8.03	
-2.00	*5.84	*5.84	*4.99	*4.99	*4.86	*4.86	*5.32	4.85	6.11	3.67	4.79	2.91			4.22	2.57	7.61	
-3.00	*5.28	*5.28	*4.87	*4.87	*4.92	*4.92	*5.49	4.88	6.14	3.69	4.84	2.95			4.83	2.94	7.01	
-4.00	*4.96	*4.96	*4.84	*4.84	*4.84	*4.84	*5.92	4.98	6.24	3.79					5.95	3.62	6.19	
-5.00			*4.96	*4.96	*5.52	*5.52	*7.20	5.19							*7.33	5.11	5.05	

- 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 Operation Manual before operating the machine.

Standard Equipments

- COLOR MONITOR DISPLAY (APC200)
- SEAT-BELT
- AUTOMATIC AIR CONDITIONER (PRESSURIZED)
- HOT & COOL BOX
- INTERMITTENT WINDSHIELD WIPER
- EMERGENCY EXIT REAR WINDOW
- AM/FM RADIO (2 SPEAKERS)
- 13 CM DUAL CORN SPEAKER X2
- CABIN LIGHT
- 3 STD WORKING LIGHTS (SLEWING TABLE-R, BOOM-L, CAB-L)
- REAR VIEW MIRROR-R
- REAR VIEW MIRROR-L
- TAIL VIEW MIRROR
- WORKING MODE SELECTOR (APC200)
- AUTO-SLOW, ONE TOUCH SLOW
- BOOM/ARM ANTI-DRIFT VALVE
- SLEWING ANTI-COUNTER ACTION
- AUTOMATIC PARKING BRAKE (SLEWING TABLE)
- AUTOMATIC PARKING BRAKE (TRAVELING)
- SERVICE PORT (1 SPOOL)
- ENTRY SYSTEM
- TRACK GUARD (1 PD EACH SIDE)

Optional Equipments

- TRANSPARENT ROOF HATCH WITH SUN VISOR
- OPTIONAL WORKING LIGHT (BOOM-R)
- OPTIONAL WORKING LIGHT (CAB-R)
- UNDER COVER SLEWING TABLE (THICKER)
- 2 WAY OPTION PIPING (FOR CRUSHER & BREAKER)
- BOOSTING CIRCUIT FOR CRUSHER
- OPTION PIPING (FOR BREAKER)
- MULTI-LEVER
- WINDSHIELD HALF SIZE GUARD
- WINDSHIELD FULL SIZE GUARD
- CABIN HEAD GUARD
- ADDITIONAL ELECTRIC HORN
- ROOM FAN
- FLUSHER SLEWING
- BUZZER TRAVELING
- ELECTRIC REFUELING PUMP
- FIRE EXTINGUISHER
- LOUD SPEAKER
- AIR CLEANER DOUBLE ELEMENT
- PRE-CLEANER
- HIGH PERFORMANCE FUEL FILTER
- HOSE RUPTURE VALVE (FOR BOOM CYLINDERS)
- HOSE RUPTURE VALVE (FOR ARM CYLINDER)
- TRACK GUARD (3 PCS EACH SIDE)
- TRAVELING MOTOR COVER (THICKER)
- COVER ON THE BOTTOM FACE OF TRAVELING FRAME