

## TECHNICAL SPECIFICATIONS



### Engine

Engine Model	CUMMINS 6BTAA5_9-C150	ISUZU AA-6BG1TRP
Number of Cylinders	6	6
Max. Torque/Speed	614N·m/1500rpm	550N·m/1600rpm
Displacement	5.9L	6.494L



### Hydraulic system

Max. Main Pump Flow	CUMMINS: 448L/min
	ISUZU: 456L/min
Main Safety Valve Pressure	34.3/37.3MPa



### Main Performance

Bucket Digging Force	143kN
Arm Digging Force	116kN
Max. Traction Force	217kN
Max. Walking Speed	4.9km/h
Min. Walking Speed	2.7km/h
Rotary Speed	11r/min
Gradeability	35°
Ground Pressure	44.9kPa



### Oil Capacity

Fuel Tank	385L
Hydraulic Tank	220L
Engine Oil	20L



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As manufacturer, LOVOL has right to constantly upgrade and improve our products without informing to customers. The pictures in literatures are for reference only, the detailed specifications are subject to real products.



Rated Power

**CUMMINS: 112kW/1950rpm**

**ISUZU: 113.2kW/2100rpm**

Operating Weight

**21800kg**

Bucket Capacity

**CUMMINS: 0.96m³**

**ISUZU: 0.92m³**

# FR220D

EXCAVATOR



## ENERGY-SAVING

### Low Fuel-Consumption Engine

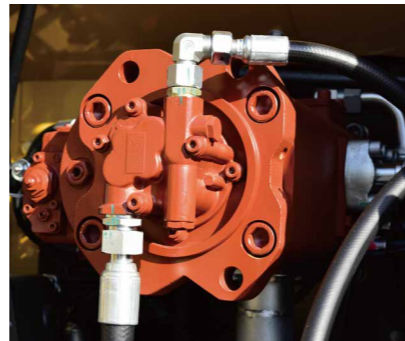
Equipped with original ISUZU turbo-charged engine which adopts mechanical high-pressure fuel pump and other technologies features strong power, low noise and low fuel consumption. Automatic idle function can reduce fuel consumption and noise dramatically.

### Optimal Control System

Adopt original Kawasaki KC-MB-10 controller which adds automatic diagnostic function, the optimal control system makes rational match between the engine and main pump, making machines work efficiently with low fuel consumption.

### Optimal Operating Mode

The crushing mode is added to help operator use hydraulic hammer, thus get outperformance with low fuel consumption. The pipelines are also optimized through new design to reduce energy waste of hydraulic system.



## RELIABILITY

### Upgraded Hydraulic System

The hydraulic pipelines adopt upgraded high-pressure hoses to avoid damage and oil leakage. Pilot oil filter is adopted which makes hydraulic system more reliable.

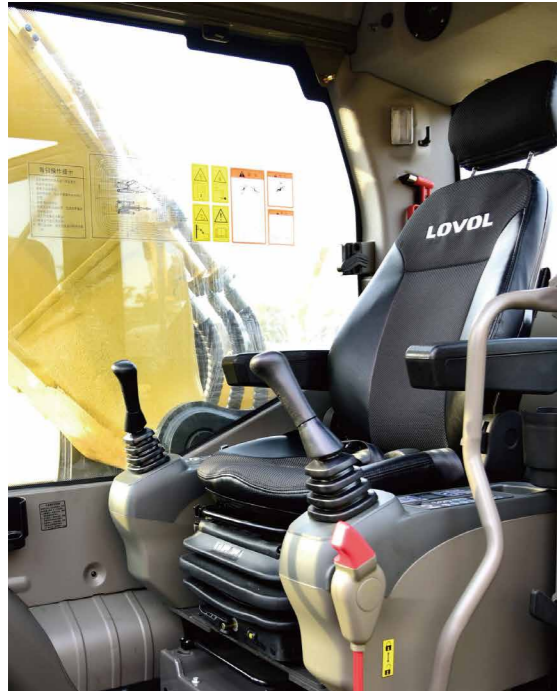
### Reinforced Structures

The advanced stress analysis technology and Q345 materials make whole structures more reliable. The front and rear support of boom are made of cast steel which effectively reduces concentration of stress, key positions are also reinforced by welding strength plate, which makes arm more robust.

### Reliable Electrical System

All the wiring harnesses adopt waterproof and dustproof connector, which has high security level and high reliability. Shut-down protection is added to reduce the failure possibility for electrical elements when power was cut-out.

## COMFORT



### Large Spacious Cab

Equipped with spacious cab which provides operator large space to operate machine. The premium suspension seat with armrests is very comfortable and it can reduce the working fatigue dramatically. Big LCD screen is easy to read all data when working. Air conditioning can provide comfortable feeling in cab.

### Ergonomic Design

The proportional joystick delivers sensitivity, accuracy and smoothness in operation. This joystick is specially designed to meet different operating conditions. Intelligent control system is standard which could control diverse attachments such as bucket, hammer, scarifier and hydraulic scissors.

### Low Noise and Low Vibration

In order to reduce work fatigue and improve productivity, the noise inside of cab has been controlled to the lowest level. The cab is attached to the frame with buffer that dampens vibrations and sound levels to enhance operator comfort.

## SERVICEABILITY



### Display Screen

Add trouble code diagnostic and maintenance monitor functions which are convenient for operator to find the failure and do the routine maintenance on time.

### Engine Hood and Panels

The large engine hood enlarges maintenance space for operator to check and maintain the engine. The tool box is big with big opening angle which can put grease bucket and special tools easily. One key can open all locks of machine, it is very convenient for the operator.

### Filters and Maintenance Period

All the filters are fixed at ground level position, it is very convenient to do routine maintenance. The maintenance interval is also extended to save time and cost.

## INCREASE YOUR PRODUCTIVITY AND PROFIT WITH LOVOL ATTACHMENTS

You can easily expand the performance of your machine by utilizing any of the variety of LOVOL Attachments. Each LOVOL Attachments is designed to fit the weight and horsepower of LOVOL Excavator for improved performance, safety, and stability.



## STANDARD CONFIGURATION

### Engine

- Turbocharged 4 stroke water-cooling direct injection type
- Complying with China Stage II emissions
- Automatic idle system
- Engine oil pan drain valve
- Radiator with protective net
- Double filter elements dry air filter element
- Air pre-filter
- Air intake heater
- Fan guard

### Hydraulic System

- Automatic hydraulic system (confluence system)
- Anti-swing valve
- Boom and arm block valve
- Multi-stage filtration system
- Cylinder buffer device
- Auxiliary hydraulic valve
- Automatic two-speed travel motor

### Electronic Control System

- 24V power supply
- Diagnostic interface
- Emergency stop switch
- Display brightness adjustment
- Maintenance tips
- Automatic diagnostic system
- Automatic idle system
- One-touch pressure augmentation
- Safe stop / start function
- Main power switch
- Anti-theft system
- Engine starting protection
- Multilingual display

### Cab

- Ashtray
- Cigar lighter
- Seat belt
- Front sunshade
- Storage box
- Escape hammer
- Thermostatically controlled air conditioner
- Shock absorber (silicone oil and rubber pad)
- Flexible antenna
- Radio (with interfaces of MP3 and USB)
- Hydraulic safety lock
- Sun-protection safety glass
- Floor mat
- Large storage area
- Pull-up front window
- Removable lower windshield
- Sunshade window
- Front-bottom glass protective screening
- Wipers
- Open skylight

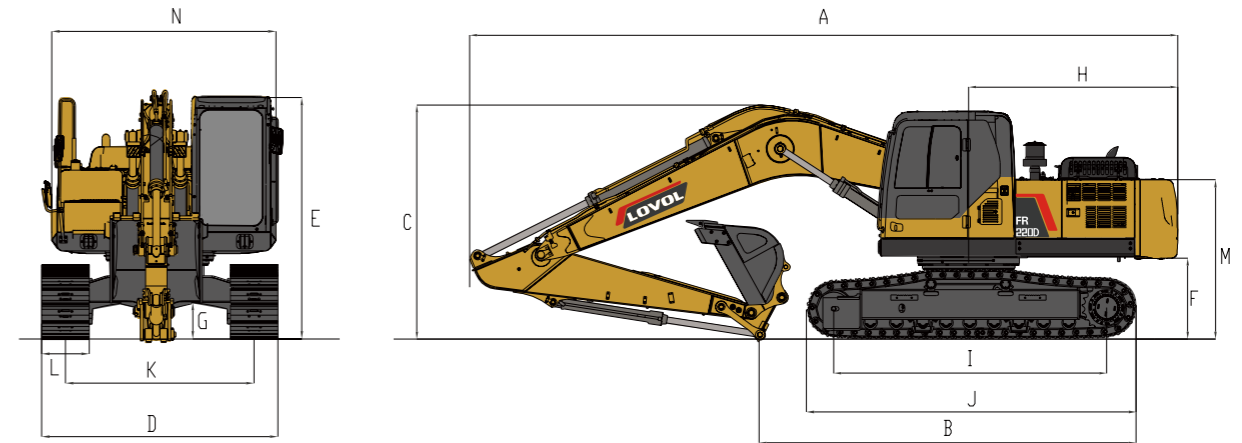
### Swing Platform

- Passage with railing
- Tool box
- Anti-skid plate
- Large pedal
- Large armrest
- Bottom protection plate
- Anti-collision beam

### Chassis

- Fixed chassis
- 600mm, three-tooth track shoe

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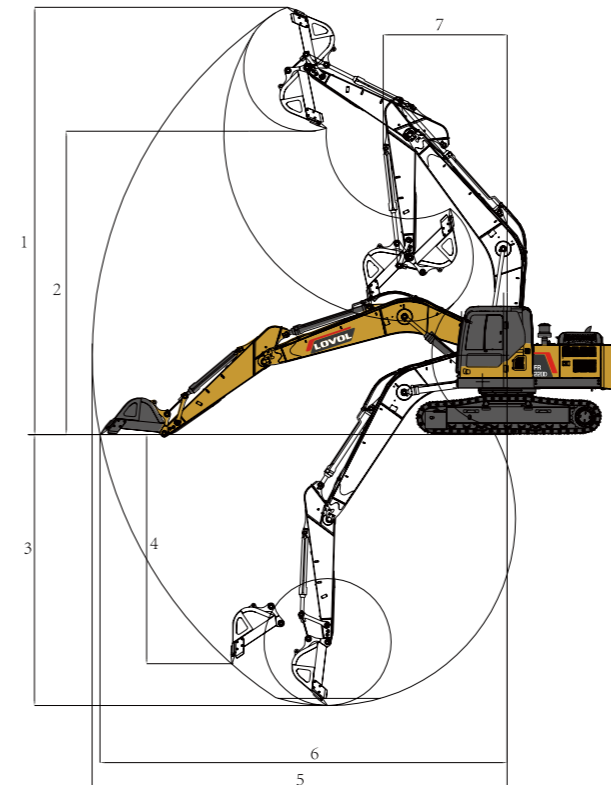


### Working Range

Max. Digging Height	1	10190mm
Max. Dumping Height	2	7260mm
Max. Digging Depth	3	6510mm
Max. Vertical Digging Depth	4	5980mm
Max. Digging Radius	5	9875mm
Max. Ground Digging Radius	6	9690mm
Min. Turning Radius	7	2910mm

### Dimensions

Shipping Length	A	9580mm
Shipping Ground Length	B	5085mm
Boom Height	C	3060mm
Shipping Width	D	2800mm
Cab Height	E	3060mm
Ground Clearance of Counter Weight	F	1090mm
Min. Ground Clearance	G	443mm
Tail Turning Radius	H	2880mm
Wheel Tread	I	3640mm
Track Length	J	4385mm
Track Gauge	K	2380mm
Track Shoe Width	L	600mm
Hood Height	M	2150mm
Rotary Platform Width	N	2875mm



### Other Specifications

Boom Length	5700mm
Arm Length	2925mm
Track Section Number (each side)	49
Track Roller Number	9