

LOVOL



Rated Power
Operating Weight
Bucket Capacity

566kW/1900rpm
68500kg
4.4m³ (standard bucket)
5.0m³ (coal bucket)

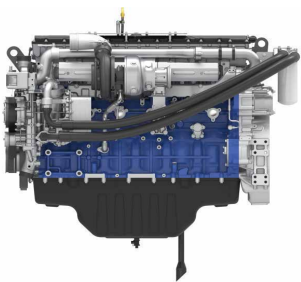
FR700F

EXCAVATOR

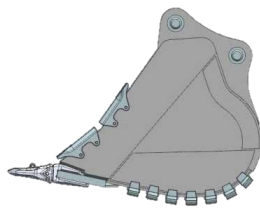


OVERVIEW

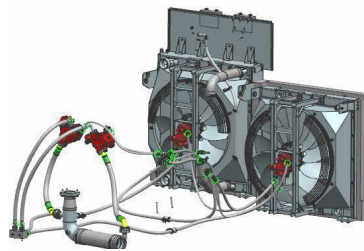
- Weichai WP15H 566kW engine +Linde300cc main pump , working mass 68500kg
- Fully electronically controlled positive flow hydraulic system
- Separate drop-off 、 4.4m³ Magnifying bucket
- Independent cooling of water and oil hydraulics, with intelligent counter-blowing fans
- Humanized and convenient maintenance and inspection access, safer and more convenient



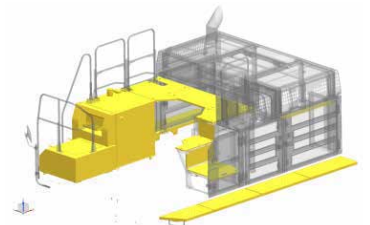
**Weichai low-speed
high-torque engines**



**Large capacity
bucket**



**Hydraulically driven inde-
pendent cooling system**



**Easy access to
maintenance**

LOVOL

EFFICIENCY

Weichai WP15H 566kW engine +Linde300cc main pump







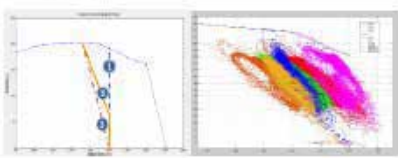
EFFICIENCY | Adopting Weichai Linde powertrain technology, the operating efficiency of the whole machine is improved by **15%** compared with that of competing products, and the fuel efficiency is improved by more than **20%**.

- Industry-leading engine thermal efficiency. Lowest fuel consumption of **183g/kWh**
- Large displacement main pump with **7.1%** increase compare to competitors
- Adopt plunger-wrapped slide shoe and **21°** swing angle technology Compact and high power density
- High displacement, low rpm
- High torque, high power, with power up to **566KW** and torque up to **2890N·m**
- Fully electronically controlled large bore main valve with a flow capacity of **550L/min**
- Custom tuning with optimized internal flow paths for less pressure loss and better response

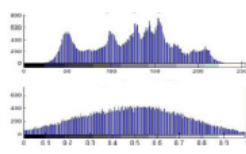


EFFICIENCY

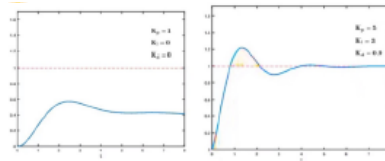
The W-LCOT adaptive control algorithm is used and the controller automatically identifies the category of working conditions and dynamically adjusts the power matching.



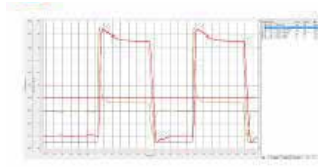
Intelligent speed control



Filtering time



PID control

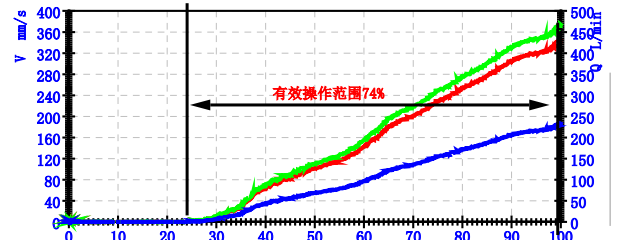
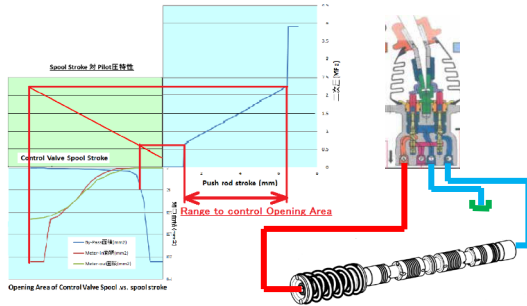


Intelligent idle speed



EFFICIENCY

Easy to operate, allowing the driver to do as he pleases, with an optional car angle mode to provide optimum flow distribution.



By optimising the spool opening, matching the flow rate and increasing the operating stroke of the handle, the operating range of Generation F has been increased by 26% compared to Generation E and the operating dead zone has been reduced by 30%.

Optimised rotary logic flow distribution, offering a wide range of loading angles to suit different operating conditions and to achieve maximum operational efficiency.

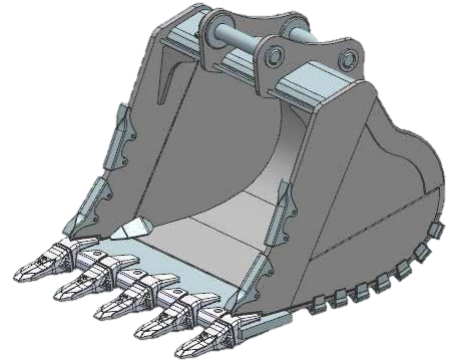


Large capacity rock bucket, optimized bucket shape, less resistance to cutting; the largest size crushing hammer in the same tonnage.

Bucket capacity from 4.4m³-5.0m³, shape upgraded, lower digging resistance, higher soil entry performance

The bucket's wear resistance has been improved. The front blade is made of NM400 and the blade guard and corner guard have been increased to improve the wear resistance by 30%.

FR700F with 215-230 breakers, the largest in its tonnage range.



RELIABILITY

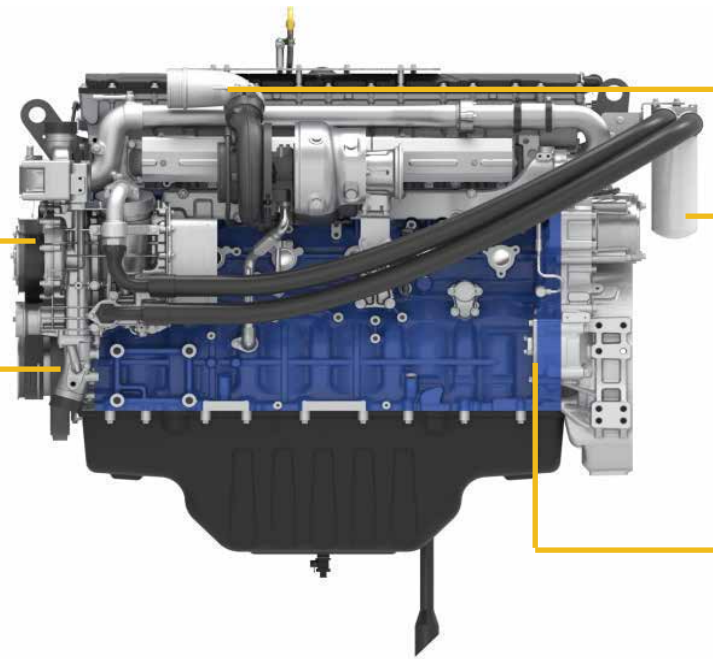
Weichai high-end H-series engines with a lifespan of up to **30,000 hours**

- **Noise-cancelling wheel systems**

Low speed ratio, noise-reducing fan, high-mounted air conditioning, easy maintenance

- **Large capacity oil sump**

Meets 35° tilt angle requirements and 500 hour oil change intervals, reinforced structure for noise suppression



● **Efficient air intake system**

Meets 3500m without power drop

● **Remote transmission of machine and fuel filters**

Easy maintenance, 500h maintenance interval, fuel water cooler as standard

● **Rear gear chamber**

Reduced NVH

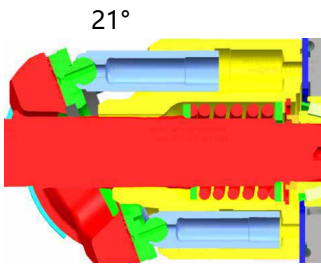




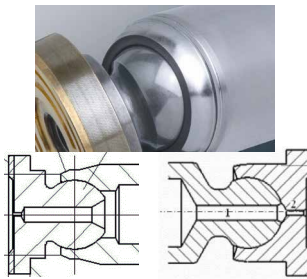
- The main pump plunger adopts a steel clad steel reverse clad structure, which is conducive to reducing the coefficient of friction, reducing the friction area, optimizing the oil film structure and improving product efficiency and reliability.
- Better construction of core rotating components, better materials and longer life.
- The main valve body is made of creeping graphite cast iron, which provides better vibration damping and thermal conductivity. Low tendency to shrink and loosen, avoiding spool jamming. Longer service life due to 3 million impacts on the ultra-high pressure endurance test bench.

RELIABILITY

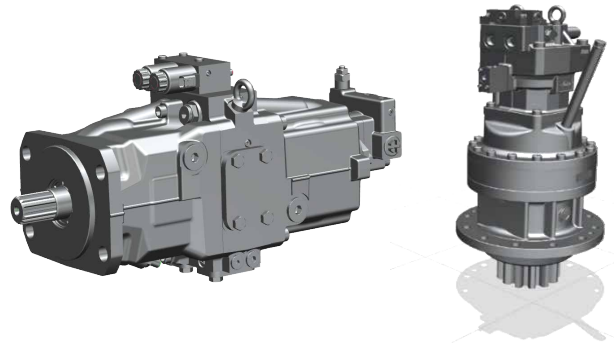
main pump and rotary motor components from the Linde 02 series have been tested in market for more than 20 years.



21° reverse pack plunger straight cylinder block



Steel-to-steel reverse ladle plungers

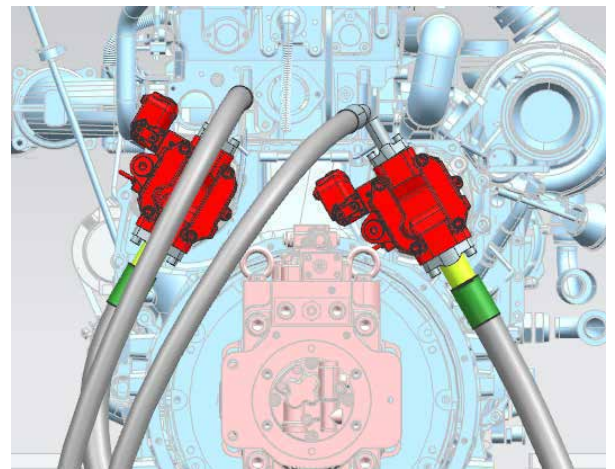
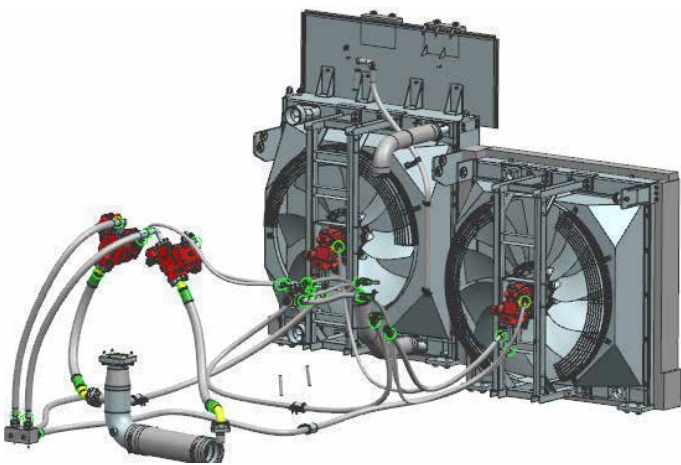


Main pump

rotating



RELIABILITY



independent water-air radiator, hydraulic oil radiator, reliable hydraulically driven fan, speed can be changed according to temperature changes.

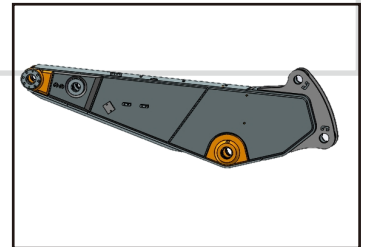
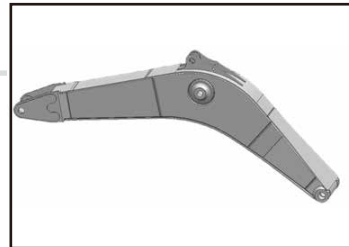
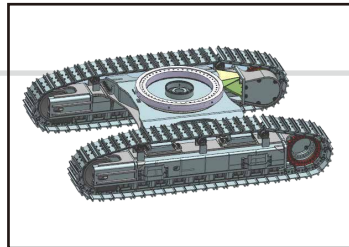
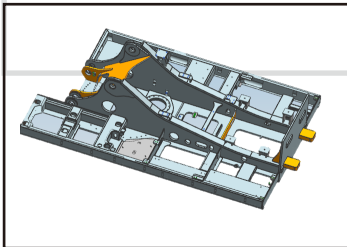
- Independent radiators for water and oil, fan speed dynamically adjusted according to temperature to achieve energy saving and consumption reduction.
- Higher reliability due to the use of hydraulic pumps and hydraulic motor drives.
- The forward and reverse hydraulic motor allows the fan to blow backwards to avoid blocking the radiator and reducing cooling efficiency.

RELIABILITY

the slewing platform adopts a heavy-duty architecture with a stress reduction of more than 40% and a split mining-specific chassis with 70 ton four wheels and one belt.



new upgraded working device architecture with a life expectancy of more than 15,000h.



Upgrading of the platform architecture with increased spacing between the main beam movable arms, significant increase in load carrying capacity.

Thickening of the main girder plate thickness, reducing working stresses by more than 40%.

Counterweight mounting without adjusting pads to avoid loose or broken mounting bolts caused by sliding adjusting pads.

Split bolt-on carriage with double support structure for the carrier sprocket.

Double rows of ball slewing supports only available in the 90 ton class, with less clearance and more strength.

Fully protected anti-trip frame.

Upgraded heat treatment process for supporting wheels and tracks to improve wear resistance by 60%.

The Boom is designed as a three-section structure with a large cross-section, with a variable-section transition at the end and additional ribbed plates inside the middle section.

The middle and rear axle seats are forged and tempered for more reliable and durable structural performance.

The pin diameter is increased to reduce the bushing face pressure, which effectively prevents the bushing from running out.

The arm is designed with a large cross-sectional structure and the front and rear axle seats are designed with wider openings to improve overall strength and rigidity.

The use of fan and hoe shaped forgings for the front and rear axle seats, reducing stress values by 50% at the weld seams and improving reliability performance.

The outer diameter of the front axle seat has been increased and adopted straight sleeve construction to prevent outward movement of the axle sleeve effectively.





INTELLIGENCE

The newly developed Reeva intelligent operating system enables power system management, intelligent interaction, automatic recognition of working conditions, auxiliary operation and individual customization.

● Intelligent vehicle control

The driver can remotely control the excavator by using the mobile phone to connect to the Bluetooth in the vehicle to power on/off, start/off, turn on/off the air conditioning, turn on/off the lights, and also enable simple mobile phone remote operation, etc.

● Intelligent multimedia

The driver can answer calls and play music through the display when connected to the car's Bluetooth using a mobile phone.

● Intelligent welcome

When the cab is opened, the interior reading light and foot light are illuminated and the WEICHAI LOVOL logo is displayed on the underside of the cab.

● Accompanying you

Home At night, when the driver finishes work and leaves the excavator, the work light is switched off on a delayed basis to light the way home.



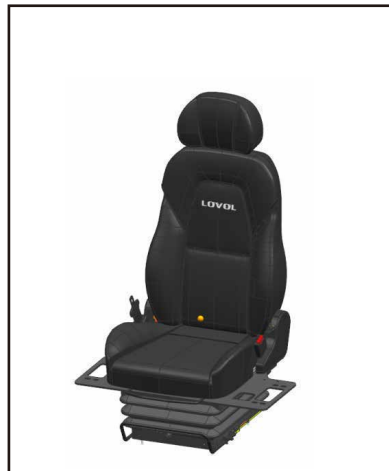
COMFORT

New interior, air duct and air outlet design, increased storage space; improved and upgraded seats for greater comfort.

Sites where excavators work are typically rugged and challenging. That's why it's important that the FR700F cab protects the operators as much as possible from fatigue, stresses, sounds, and temperatures of the job

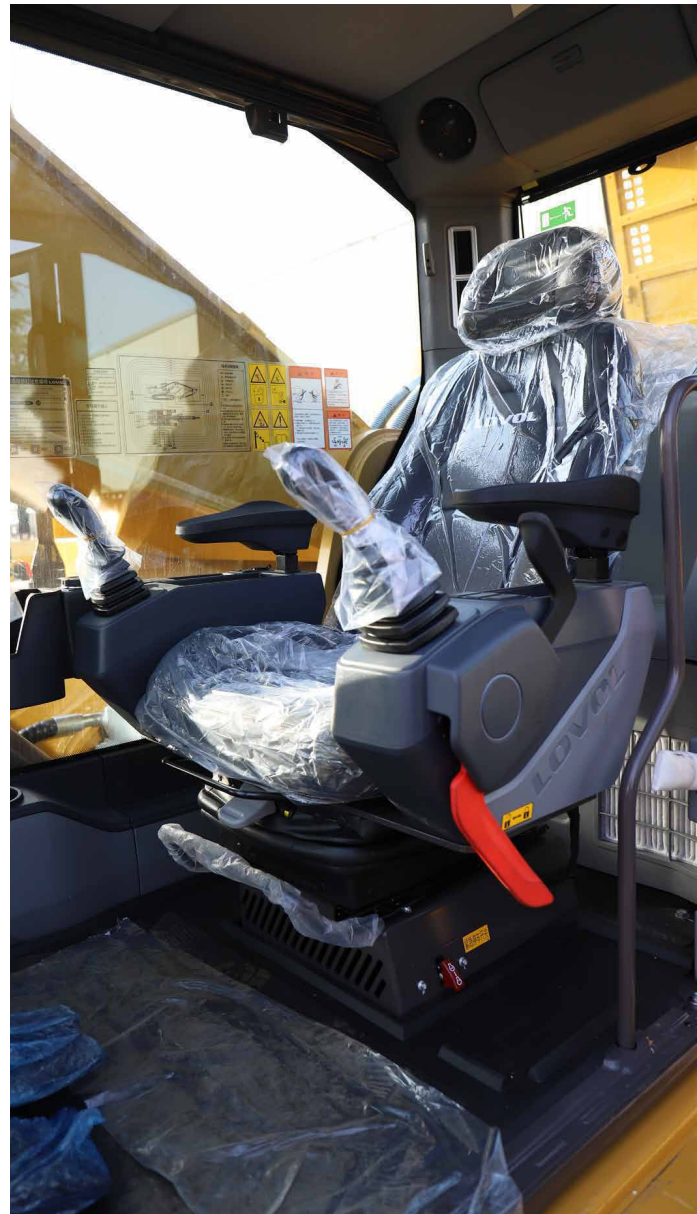
SOUND-SUPPRESSED CAB

The cab is sound suppressed and sealed. All controls are located in front of the operator. Getting to critical information and settings is easy with the touchscreen monitor. Shortcut keys make it even easier and include two for entertainment and heating and air conditioning. There is also a shortcut key for apps and functions that you can set.



The air conditioning ducts have been CFD analyzed to provide less wind resistance and lower noise levels, providing a cool and comfortable space for the driver and more storage space for the driver's daily trivial items.

Wider seat surface for a more comfortable ride; three-stage adjustment of SIP points to meet the needs of different heights.



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, 6-cylinders, water-cooling, direct injection

Radiator with protective fence

Oil bath type cleaner

Air intake heater

Fan guard

Double filters, dry air filter

Engine oil pan with oil drain valve

Automatic idle speed system

Three-stage fuel filter

75A/24V alternator

Cab

Ashtray

Cigarette lighter

Seat belt

Shade plate

Storage compartment

Emergency hammer

Air conditioner

Audio speaker

Shock absorber

Flexible aerial

Radio

Hydraulic safety locking rod

Sun proof safety glass

Cab floor mat

Pull-up front window

Dismountable lower windshield

Sun shade window

Windshield wiper

Skylight window

Suspended seat

Big storage area

Chassis

Fixed chassis

600mm/800mm double grouser track shoe

Hydraulic System

Automatic hydraulic system (flow confluence system)

Multistage filtration system

Anti-sway valve

Boom and stick locking valve

Cylinder buffer device

Anti-slope turning device

Waste oil drainage pipeline

Pilot buffer valve (rotary, stick, boom)

Dual-speed travel motor

Hydraulic hammer pipeline

Electronic Control System

24V power battery

Monitor brightness adjustment

Maintenance tips

Safe stop & start function

Master switch

Engine start protection

Multilingual display

Cab ceiling light

Diagnostic interface

Emergency stop switch

Automatic diagnosis system

Automatic idle speed system

One-touch pressure enhancement

Anti-theft system

Swing Platform

Toolbox

Large pedal

Large handrail

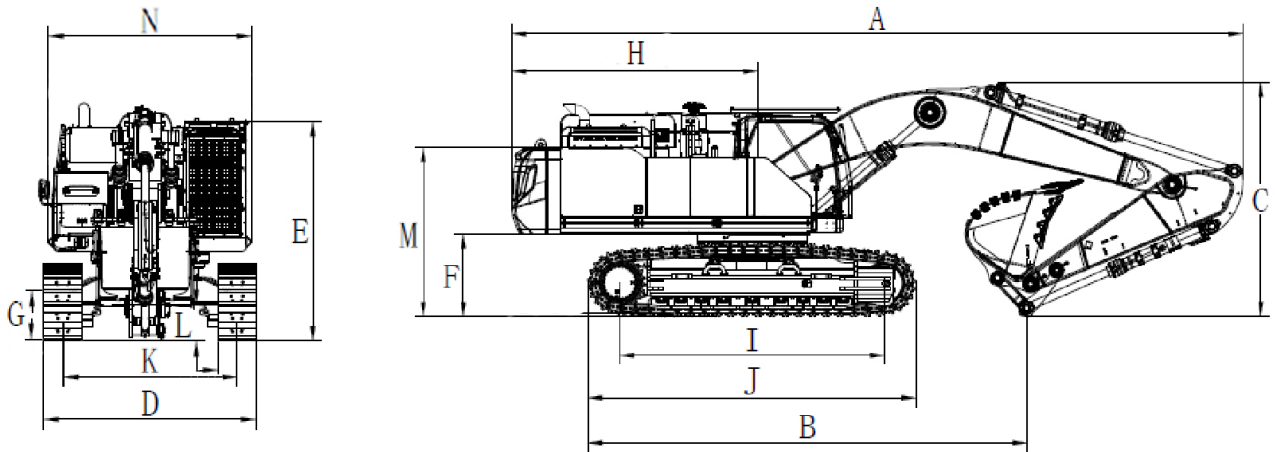
Bottom guard plate

Anti-crash beams

Anti-skid plates

Passage with handrails

TECHNICAL SPECIFICATIONS



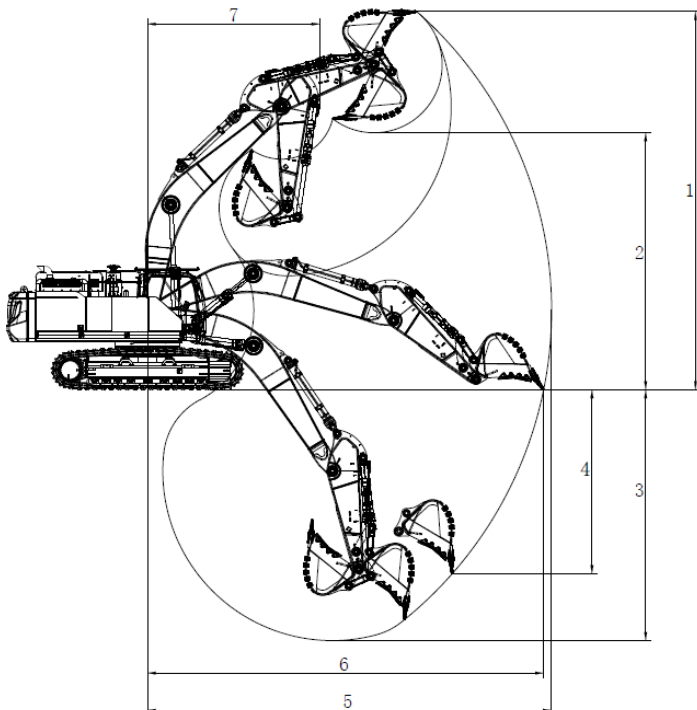
Working Range

Max. Digging Height	1	11260mm
Max. Dumping Height	2	7320mm
Max. Digging Depth	3	7100mm
Max. Vertical Digging Depth	4	4250mm
Max. Digging Radius	5	11680mm
Max. Ground Digging Radius	6	11380mm
Min. Turning Radius	7	5100mm



Dimensions

Shipping Length	A	12250mm
Shipping Ground Length	B	7700mm
Boom Height	C	4750mm
Shipping Width	D	3500mm
Cab Height	E	4000mm
Ground Clearance of Counter Weight	F	1580mm
Min. Ground Clearance	G	880mm
Tail Turning Radius	H	4120mm
Wheel Tread	I	4570mm
Track Length	J	5710mm
Track Gauge	K	2810/3350mm
Track Shoe Width	L	600mm
Hood Height	M	3650mm
Rotary Platform Width	N	3350mm



Other Specifications

Boom Length	6800mm
Arm Length	2800mm
Track Section Number (each side)	52
Track Roller Number	9

TECHNICAL SPECIFICATIONS



Engine

Engine Model	WEICHAI WP15H
Number of Cylinders	6
Max. Torque/Speed	2890N·m/1200~1600rpm
Displacement	15.3L

Main Performance

Bucket Digging Force	374kN
Arm Digging Force	320kN
Max. Traction Force	430kN
Max. Walking Speed	4.5km/h
Min. Walking Speed	3.1km/h
Rotary Speed	7.8r/min
Gradeability	35°
Ground Pressure	111kPa



Hydraulic system

Max. Main Pump Flow	1020L/min
Main Safety Valve Pressure	34.3MPa



Oil Capacity

Fuel Tank	800L
Hydraulic Tank	600L
Engine Oil	52L



WE AIM AT CUSTOMERS' SATISFACTION.

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