

# *NEW* **F** SERIES



**Engine**

Perkins 2806IIIN

**Net Power**

433 kW (581 hp / 589 ps) @ 1,400 rpm

**Operating Weight**

93,000 kg (20,503 lbs)

**Bucket Capacity**

5.6m<sup>3</sup> (7.32yd<sup>3</sup>)

## **990F** **EXCAVATOR**

TOUGH WORLD. TOUGH EQUIPMENT.





# OUR NEW F-SERIES. THE BEST GETS EVEN BETTER

We’ve taken the very best insight from our E-Series machines, combined that with extensive R&D and customer intelligence to deliver the **F-Series**, a new range of state-of-the art excavators from 1.5 tonnes to 120 tonnes, designed around the operator. So when the work gets tough, the 990F gets tougher.

## THE NEW 990F THE BEST PLACE TO WORK A 12-HOUR SHIFT

You know all about working hard in the toughest places - so do we. With over 100,000 LiuGong excavators currently in the field, clocking up over ½ billion productive hours we have real insight into what professional operators really want from their machines.

In tough, dusty applications like mining, where rock breaking and heavy loading are the day-to-day work, machines have got to be durable, reliable but above all, they’ve got to be highly productive.

## INSPIRED BY YOU

The New 990F delivers all this and more. We’ve listened to you and used this valuable insight to design a machine that professional operators are going to want to get in and stay in.

No matter how tough or difficult the conditions, you are going to feel right at home in the New 990F. It’s more than a machine; it’s a teammate you can rely on.

## OUR NEW 990F DELIVERS ON 3 ESSENTIALS:

1



HIGH PRODUCTIVITY  
& EFFICIENCY

2



MAXIMIZED  
UPTIME

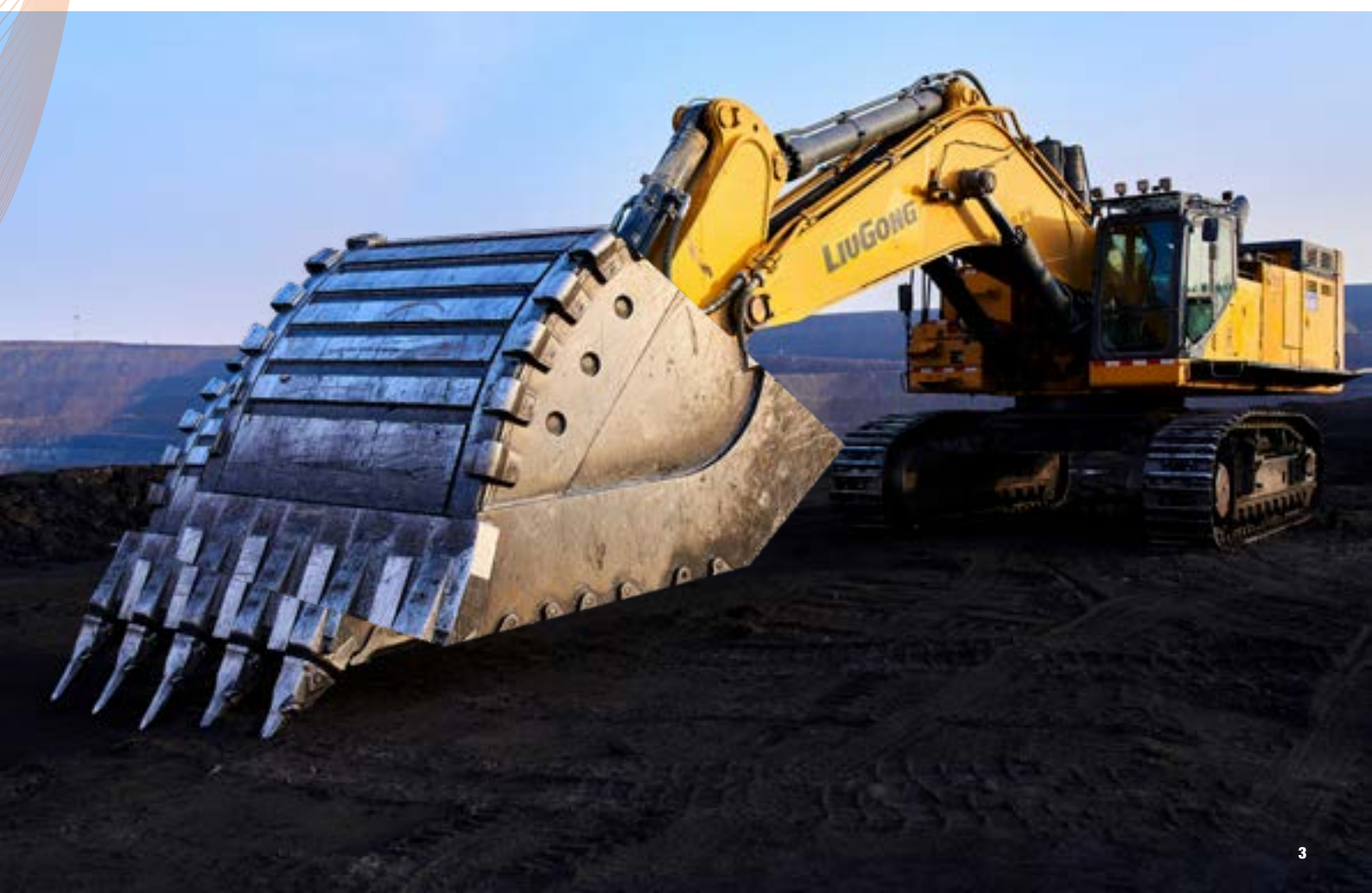
3



UNMATCHED OPERATOR  
COMFORT & SAFETY



With the 990F, we’ve created something unique. An exceptionally performing machine which gives you everything you want and everything you need – without compromise. Tough, intelligent, the F-Series shares our Red Dot Award-winning DNA and is designed to let the operator do more in safety and comfort.







# DESIGNED FOR YOU

Take a walk around the New 990F and you will see the difference. It's a big, tough machine that's high on productivity, reliability and operator safety and comfort.

## HIGHEST PRODUCTIVITY & EFFICIENCY

### 1 DIGGING FORCE

For the highest productivity, you need a machine that can dig the toughest ground. With 496 kN of digging force, the New 990F easily out-performs any competitive machine in its class.

### 2 ADVANCED HYDRAULICS

The 990F benefits from an advanced variable hydraulic control system which changes the pressure and distribution of flow according to the operating conditions. This smart feature improves operating precision, reliability and fuel efficiency and delivers faster cycle times.

## MAXIMIZED UPTIME

### 3 REINFORCED BOOM AND ARM

We have designed a strong, durable boom and stick to work in **tough operating conditions**. With built-in extra strength and protection from reinforced plates and ribs, our boom and arm have long-term durability and resistance to high torsional stress.

### 4 TOUGH UNDERCARRIAGE PROTECTION

We've taken the challenge to make our tough undercarriage even tougher. Track shoes, rollers, idlers and final drives are built with high-tensile steel and have all been strengthened to reduce damage and increase service life.

## SUPERIOR OPERATOR COMFORT & SAFETY

### 5 EASY ACCESS MAINTENANCE

For speed and simplicity, the engine covers, fuelling and maintenance access points have all been designed to make daily checks and maintenance pain free.

### 6 COOL, CLEAN & COMFORTABLE

Our pressurized cab keeps dust, noise and contamination out. The fully adjustable, air suspension seat is surrounded by controllable air-conditioning vents to keep the operator cool, fresh and alert – everyday.







# WORK SMARTER & HARDER FOR LONGER

Whatever the job, our New 990F will work smarter and harder for longer to get that job done. From removing the overburden, to creating access roads. From mining applications, to extracting, breaking and handling materials to reclaiming the site at the end of its life. No matter the job, the 990F delivers shift after shift.



### WORKS HARDER FOR LESS

Tough environments demand the highest productivity and efficiency from machines. With greater digging force, faster cycle times and greater fuel economy the New 990F delivers. With the widest possible range of attachments including hammers, and rock buckets. The New 990F provides multi-functional performance and delivers the maximum return on investment.

### PUTTING YOU FIRST

The New 990F is a highly productive machine, but it's more than that. It's a safe and comfortable place to work, too. Our design team have focussed on creating the very best working environment, so the operator can work harder in comfort, for longer. A FOPS/TOPS protected pressurised cab, all-round visibility and the highest levels of comfort and instrument ergonomics create a place where you will want to work.



### MAKE EVERY SECOND COUNT

In your tough world time is money and down-time is lost revenue. The New 990F has been designed to make every second count. From productivity benefits like faster cycle times to improving reliability by strengthening key components such as the boom and the arm. In designing the New 990F, we've shared your desire to get the most productivity out of every day.



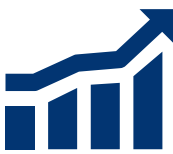
✓ GREATER DIGGING FORCE

✓ FASTER CYCLE TIMES

✓ GREATER FUEL ECONOMY







# HIGHEST PRODUCTIVITY & EFFICIENCY

A new, tougher machine that is simple to use and is safe and comfortable for the operator, the New 990F appears to have it all. But ultimately, this tough new machine will be judged on its working and earning potential and its overall life cost. In both these vital areas of productivity and efficiency, the New 990F excels.

## CLASS LEADING DIGGING FORCE

To achieve fast cycle times and lowest cost per tonne when moving materials, you've got to have digging force that is up to the job.



Punching a massive **496 kN** of digging force, the New 990F easily out-performs any competitive machine in its class.

The source of this awesome power comes from a combination of a powerful engine, superior hydraulic system and lightweight working tools.

## DO MORE IN LESS TIME

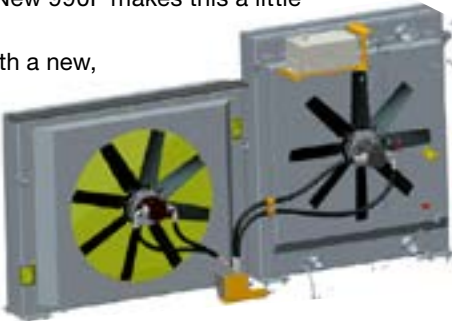
Delivering lowest cost per tonne is about doing more work in less time for less cost. With class-leading digging force, the 990F has a clear advantage. This advantage is capitalised on with the new fully electro-hydraulic system in conjunction with the 990F's high power, high torque, Tier3 / Stage IIIA emission certified Perkins 2806IIIIN engine. This combination of force, hydraulics and power simply allows you to do more for less.



## NEW REVERSAL FAN

Keeping the machine free from dust and contamination is a tough job, but the New 990F makes this a little easier.

The machine comes with a new, side-by-side cooling system with easy-to-clean cores, and a smart variable-speed fan that can reverse to efficiently blow out any unwanted debris.



## HIGHLY EFFICIENT HYDRAULICS

Our hydraulics system has been optimized for operational performance. The large displacement hydraulic pump reduces fuel consumption whilst ensuring working efficiency at a low engine speed. The electronically controlled hydraulic pumps and valves provide hydraulic oil as it is needed, reducing heat loss and further reducing fuel consumption.



## RIGHT POWER FOR THE JOB

To make work easy, the 990F's Integrated Work Mode allows you to select the best work mode for the job in hand. With a choice of three modes, each designed to match engine speed, pump flow, and system pressure to the chosen application, you can be sure that you are always working in the most cost effective way:



**Economy (E) mode** – for light work



**Standard (S) mode** – for standard operation



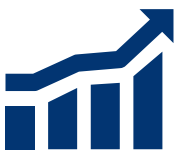
**Power (P) mode** – for heavy duty



## MAXIMISING PRODUCTIVITY THROUGH EFFICIENCY.

With the new 990F, you'll save time and money without compromising on power and efficiency.





# REDUCE COST & EXTEND PERFORMANCE

The 990F works hard to deliver the best return for your investment by reducing overheads on fuel through smart engine technology to ensure maximum efficiency, to state-of-the-art engine oil and hydraulic fluid filters increasing performance by thousands of hours.



Using our **LONG-SERVICE-LIFE HYDRAULIC OIL** can save money and increase performance – this state-of-the-art lubricant extends the oil replacement cycle to **5,000 HOURS**.



Our new super-fine hydraulic fluid filter separates out even the smallest particles extending its replacement cycle to **1,000 HOURS**.



## AUTO IDLE, AUTO SHUTDOWN AND BOOST

For the most efficient operation, you need to save as much fuel, as often as possible without compromising performance. Our Auto Idle function automatically reduces the engine speed and fuel consumption when the engine is on standby.



## KEEPING YOUR FUEL COSTS LOW

Fuel is one of the biggest overheads, so every saving makes a difference. The New 990F is powered by a smart Perkins 2806D Tier3 / Stage IIIA emission certified engine. This Inline 6-cylinder, direct injection turbo-charged engine actively looks for ways to save fuel. During the work cycle, it automatically regenerates itself ensuring you have the power you need whilst saving fuel. The engine is perfectly matched to mechanical, electrical and hydraulic systems to get the most out of every drop of fuel.



## LONGER SERVICE LIFE. LOWER FUEL CONSUMPTION.

The 990F delivers on site as well as it does on the balance sheet.





# MAXIMIZED UPTIME

The New 990F is designed to deliver maximum uptime, shift after shift. With toughness and durability built into the heart of machine, the 990F works harder for longer in the toughest of jobsites.

## EXTREME TESTING



Toughness and durability are key to maximizing uptime. We don't just talk about toughness – we prove it with thousands of hours' worth of reliability testing. All the key components on the New 990F have been tested to the extreme in our state-of-the-art testing facility.



Our boom arm for example, undergoes a gruelling Swing Test to prove its durability in the toughest applications.



## BOOM FLOATING FUNCTION



This helps the operator avoid accidental damage during breaking by using the boom's weight to cut off the oil intake. This action reduces the energy output and potential for damage whilst reducing fuel consumption.

## REINFORCED BOOM AND ARM



Breaking and lifting for 12 hours a day is an extreme workout for the boom, arm and hydraulics. So we've built-in extra strength and protection to keep these important components in peak condition. The super-strong boom design benefits from integrally forged front and rear supports.

This one-piece design increases strength and reduces welding and the potential for deformation. In addition, the front and rear plates have also been reinforced. To support the boom, the arm has been strengthened with reinforced plates and ribs.

## ADVANCED HYDRAULICS



The 990F's advanced variable hydraulic control system allows the machine to changed the pressure and distribution of flow according to the application and conditions helping to improve efficiency, productivity, and durability.

The Auxiliary Pipeline Flow function on the LCD screen also allows you to set a specific flow during breaking to achieve greater efficiency. Externally strengthened hydraulic hoses easily handle high operating temperatures. The pipes' layout has been redesigned and rubber gaskets added to prevent damage, reduce friction, and increase the service life of the hoses.

## HEAVY-DUTY ROCK BUCKET

Our new heavy-duty rock bucket is built with super-strong, wear resistant steel plates. Perfectly matched for rigorous quarrying and mining applications it has long-life built-in.

You have a choice of high strength, wear resistant parts such as teeth, adapters, segments, side cutters and shrouds to suit your application.



## REINFORCED UNDERCARRIAGE STRUCTURE

The undercarriage is strengthened to provide excellent reliability and durability when working on rocky ground or blasted rock. An improved greased track link between pins and bushing reduces stress, reduces noise and reduces wear. We've also added a Full-covered Track Guard to maintain track alignment and improve the machine's overall performance.

## KEEPING YOU ON TRACK

Double grouser shoes with higher, tougher and thicker ribs provide better longevity, stability and grip.







# AT YOUR SERVICE

Maximizing uptime is about toughness and durability, but it's about maintenance too. The faster and easier a machine is to maintain, the more productive it is. For speed and simplicity, the engine covers, fuelling and maintenance access points have been designed to make daily checks and maintenance pain free so you can get back to work faster.




### CENTRALISED LUBRICATION POINTS

To save valuable time, we have centralised the lubrication points on both the arm and boom to make them quicker and easier to maintain.

### SAFER ACCESSIBILITY

Access to the cab is safer than ever with the wider catwalk, larger steps with handrails and anti-skid surface. With these updated features, maintenance and servicing can be more efficient than ever.





### EXTENDED AIR FILTER LIFE

Tough, dusty conditions give air filters a real workout. The oil bath air pre-filter on the New 990F protects, cleans and extends the filter life to **1,000 HOURS**.

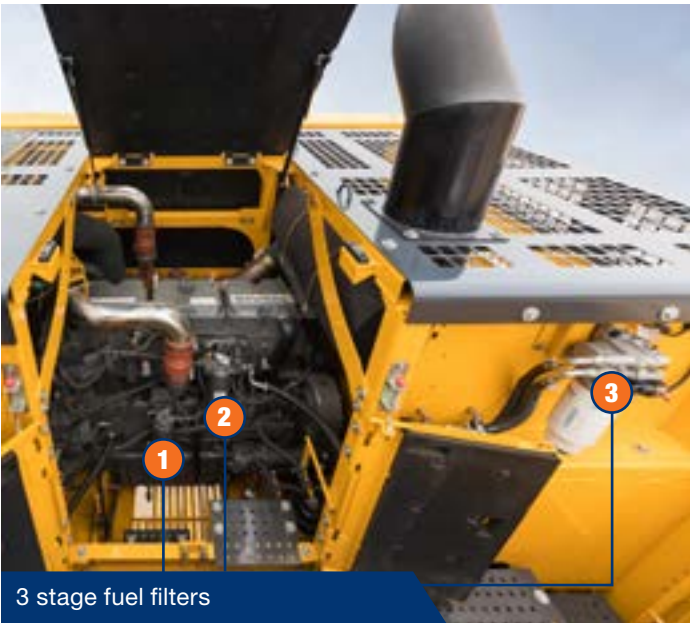
### EASY DOES IT

Large, fully opening side covers give easy access to air filters, oil filters, fuel prefilter, dipstick, hydraulic tank and oil fill cap, not to mention the engine, main pump and radiator.

To make routine checks and maintenance even faster and safer, oil filters and fuel filters are all at ground level.



Oil and air filters



3 stage fuel filters

### PROACTIVE DAMAGE PREVENTION

The new Hydraulic Fluid Filter Restriction Indicator will help prevent contamination becoming a big problem. When the air filter becomes blocked with unwanted particles, the air filter pressure switch sends a signal to the LCD monitor. A warning light appears on the cabs LCD screen, letting the operator know maintenance is needed. It's a smart active technology designed to prevent unwanted downtime and cost.

### AUTOMATIC FUEL AND LUBRICANT SYSTEMS

On-site refuelling without a fuel truck or regular fuel pump is simple and instantaneous with our electric refuelling pump attachment. The pump detects when refuelling is required and simply takes fuel from a barrel or fuel storage reservoir, automatically shutting off when the fuel tank is full. We also offer an Auto Lube System as an option, helping you reach all the greasing points quickly and easily.



### iLINK LIUGONG'S INTELLIGENCE SYSTEM



iLink gives you the total picture of your machines' activities. You can see each machine's precise working location, the exact working and engine hours, oil pressure and total fuel consumption, all in easy to read status reports. This information is vital in helping you improve performance and productivity.



### iLINK PROTECTS

You can use iLink to set both Geo and Time fencing allowing machines to operate safely in a clearly defined area for a pre-determined period of time. You can also immobilize and remobilize your machines remotely.



### iLINK IS PROACTIVE

iLink constantly monitors key components and provides warnings and alerts should faults occur. Remote diagnostics allow the technician to understand the problem quickly and save time by fixing it remotely or by reducing call-out time on site.



### PLUG AND PLAY SIMPLICITY.

iLink is available for all Liugong excavators and wheel loaders. Our single SIM solution provides worldwide data transmission at a fixed, affordable price.





# SUPERIOR OPERATOR COMFORT & SAFETY

For 12 hours a day, the cab is your home and your workplace so we've made sure that it's a quiet, comfortable, and highly productive space where you will enjoy spending time. After all, your job is tough enough – you deserve a machine that puts you first.

## ANOTHER VISIBILITY LEADER



 LiuGong is building a reputation for excellent visibility and the 990F is no exception. The high visibility cab gives you panoramic views of the jobsite, aiding performance and safety. The large glass skylight further enhances visibility and serves as an emergency exit.

A rear-view camera comes as standard with a 360-degree, 4-camera set up available as an option. The spacious, easy entry cab is protected by FOPS with a Falling Object Guard (FOGS) available as an option. The 990F can also be fitted with a full-length track guard for added protection.



### QUIETER AND SMOOTHER

The new, reinforced frame with special viscous mounts, a new sound absorbing roof liner and improved cab seals significantly reduce unwanted noise and vibrations creating a more relaxing and productive workspace.

## NEXT LEVEL COMFORT SEAT



Long shifts are made easier when you've got a comfortable seat. We've delivered with a fully adjustable and reclinable, air suspension seat that takes comfort to a new level. Our new seat will hold, support, relax and give you the smoothest ride hour after hour.



### MORE SPACE FOR YOU

With storage spaces in the front, side consoles and rear, you can keep your belongings safe and in easy reach. Whether it's the first coffee of the day or an energy drink to keep you going, we've placed our cupholder right where you need it. As for entertainment, we've added Bluetooth connectivity and included two handy 12-volt power sockets for charging your smart phone or tablet.

## CLASS-LEADING VENTILATION

Our new pressurized cab keeps dust, noise and contaminants away while the automatic climate control surrounds you with fresh, filtered air for cooling or heating depending on the environment.



## EVEN EASIER CONTROL

Long days at the jobsite can put a physical strain on the operator, so we've designed our machine to be easier to handle. We've added an electronically controlled right and left joystick console to take the strain out of the job.



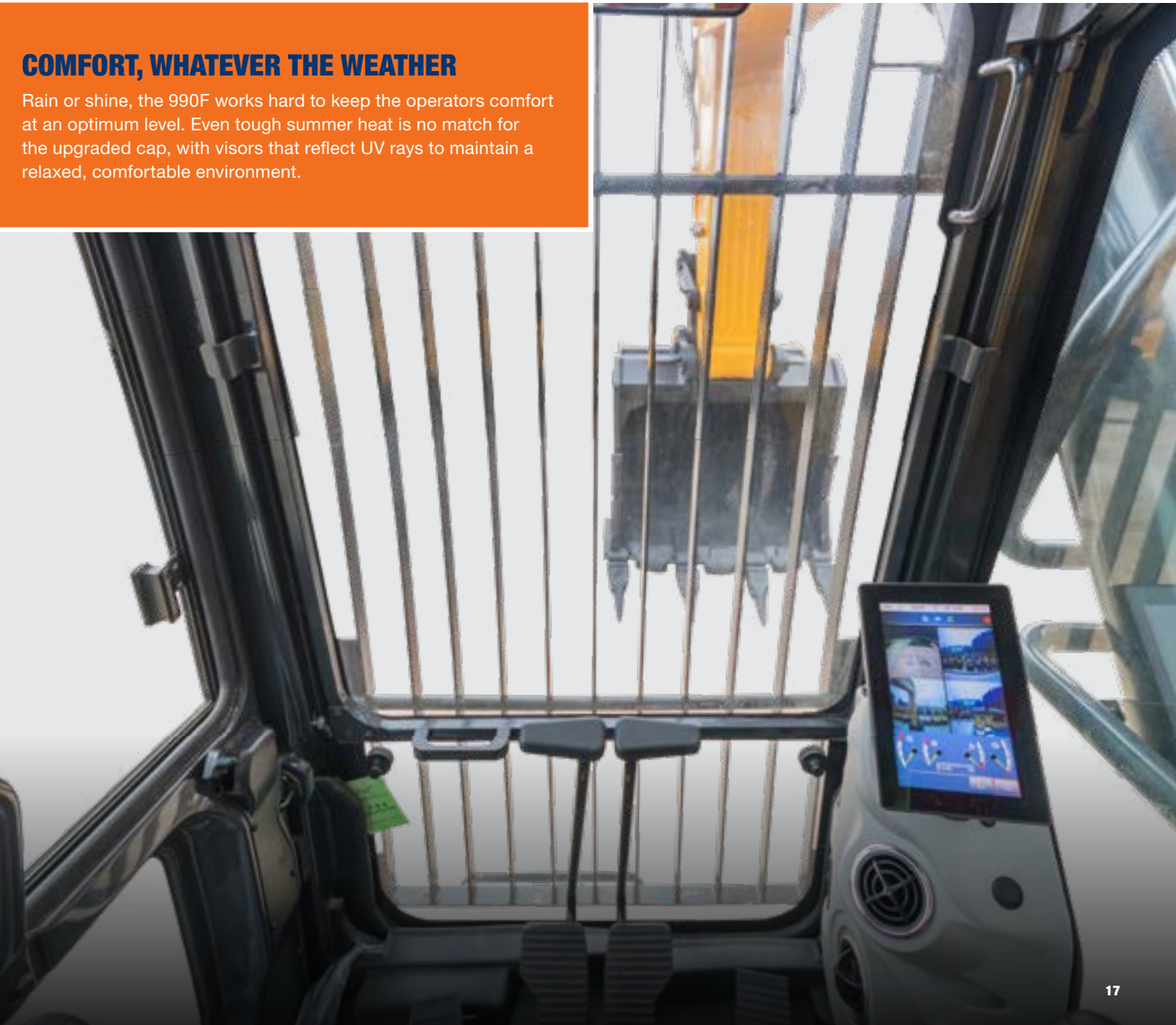
## REAL-TIME INFORMATION

Our LCD monitor is ergonomically positioned to give you all the real-time information you need to effectively and efficiently operate your machine. From travel speed to engine oil pressure alarms, from fuel level indicator to coolant temperature, large, simple to read icons give you all the information – where you need it.



## COMFORT, WHATEVER THE WEATHER

Rain or shine, the 990F works hard to keep the operators comfort at an optimum level. Even tough summer heat is no match for the upgraded cap, with visors that reflect UV rays to maintain a relaxed, comfortable environment.









# TRUST US TO BACK YOU UP 100%

The New 990F is built for tough, remote locations where the days are long, the work is hard, and the access is difficult. In these applications, having confidence in the machine’s back up and support network is a vital part of the purchasing decision. How do we at LiuGong measure up? We are committed to backing you all the way.

PROFESSIONAL ADVICE

We are dedicated to reducing your total cost of ownership and increasing your profits. LiuGong’s experts will provide targeted advice on everything, from choosing the right machine for your needs to maximizing its efficiency on site.

FAST RESPONDING GLOBAL NETWORK

We have an extensive dealer network of over 2,650 outlets in more than 130 countries. All supported by 10 regional subsidiaries and 9 global parts centres offering expert training, parts and service support.



WHERE YOU NEED US, WHEN YOU NEED US

Reliability is built into our machines, but all machines have some planned downtime. Our aim is to reduce even planned down time to the minimum by getting it right. Technician training and parts availability are high on our agenda, as is keeping you informed on service and maintenance work and providing clear and accurate estimates, invoices and communication. These may be small things, but customer feedback tells us that these basics really matter – so we aim to get them right.

MAINTENANCE AND SUPPORT PACKAGES

From genuine LiuGong parts, to full repair and maintenance contracts, LiuGong has the flexibility to offer the level of support and response to suit your business and applications. Whatever level of support you choose you can be confident that it is backed up by LiuGong’s service promise.



IT ALL ADDS UP

With the New 990F, we’ve risen to the challenge and given you everything you need and nothing you don’t. It’s a big, powerful excavator that can handle the toughest jobs in the toughest locations with speed and efficiency. With the support and backup of LiuGong’s service promise the New 990F performs equally well on the job site and on the balance sheet.

Add up the benefits and you’ll see that New 990F represents the true formula for success.



**HIGHEST PRODUCTIVITY & EFFICIENCY**

+

**MAXIMIZED UPTIME**

+

**SUPERIOR OPERATOR COMFORT & SAFETY**

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**CUSTOMER SATISFACTION**





# SPECIFICATIONS

|   |           |
|---|-----------|
| Operating weight  | 93,000 kg |
| Operating weight includes coolant, lubricants, full fuel tank, cab, standard shoes, boom, arm, bucket and operator 75 kg. |           |
| Bucket capacity   | 5.6 m³    |

| ENGINE   |                            |
|--|----------------------------|
| Description  |                            |
| Inline 6-cylinder, turbocharger, electronically controlled direct injection.<br>Air cleaner: Air filter with pre-cleaner.<br>Cooling system: Charge-air cooler (CAC) |                            |
| Engine manufacturer  | Perkins                    |
| Engine model   | 2806 IIN                   |
| Aspiration   | Wastegate Turbo (WGT)      |
| Charged air cooling  | Aftercooler                |
| Cooling fan drive  | Hydraulic & Direct         |
| Displacement   | 18.1 L                     |
| Rated speed  | 2,100 rpm                  |
| Engine output - net (SAE J1349 / ISO 9249)   | 433 kW (581 hp / 589 ps)   |
| Engine output - gross (SAE J1995 / ISO 14396)  | 447.5 kW (600 hp / 608 ps) |
| Maximum torque   | 2742 N·m @ 1,400 rpm       |
| Bore × Stroke  | 145×183 mm                 |

| UNDERCARRIAGE              |          |
|----------------------------|----------|
| Track shoe each side       | 51       |
| Link pitch                 | 260.4 mm |
| Shoe width, double grouser | 650 mm   |
| Bottom rollers each side   | 9        |
| Top rollers each side      | 3        |

| SWING SYSTEM   |             |
|--|-------------|
| Description  |             |
| Planetary gear reduction driven by high torque axial piston motor, with oil disk brake. Swing parking brake resets within five seconds after swing pilot controls return to neutral. |             |
| Swing speed  | 6.4 rpm     |
| Swing torque   | 376,000 N·m |

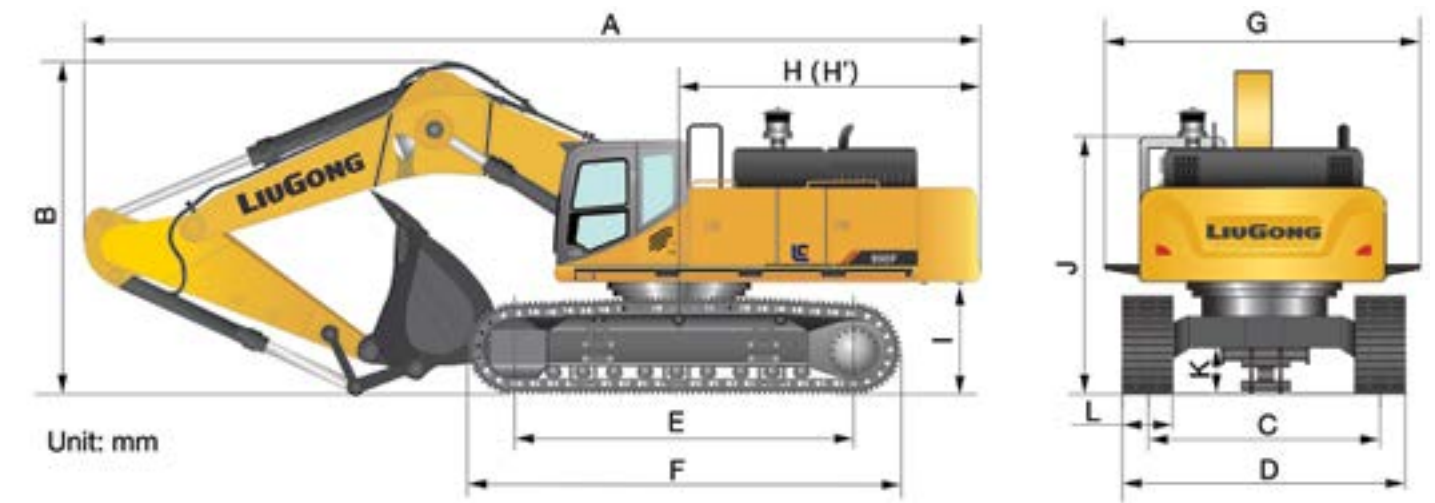
| HYDRAULIC SYSTEM                |  |
|---------------------------------|--|
| Main pump                       |  |
| Type                            | Two variable displacement piston pumps |
| Maximum flow                    | 2 × 504 L/min                          |
| Pilot pump                      |  |
| Type                            | Gear pump                              |
| Maximum flow                    | 37.1 L/min                             |
| Relief valve setting            |  |
| Implement                       | 35 / 37.3 MPa                          |
| Travel circuit                  | 35 MPa                                 |
| Slew circuit                    | 31 MPa                                 |
| Pilot circuit                   | 3.9 MPa                                |
| Hydraulic cylinders             |  |
| Boom Cylinder – Bore × Stroke   | Φ210 × 1,967 mm                        |
| Arm Cylinder – Bore × Stroke    | Φ220 × 2,253 mm                        |
| Bucket Cylinder – Bore × Stroke | Φ220 × 1,586 mm                        |

| ELECTRIC SYSTEM |                |
|-----------------|----------------|
| System voltage  | 24 V           |
| Batteries       | 2 - (2 x 12) V |
| Alternator      | 24 V - 115 A   |
| Start motor     | 24 V - 9 kW    |

| SERVICE CAPACITIES     |         |
|------------------------|---------|
| Fuel tank              | 1,240 L |
| Engine oil             | 64 L    |
| Final drive (each)     | 25 L    |
| Swing drive            | 14 L    |
| Cooling system         | 70 L    |
| Hydraulic reservoir    | 480 L   |
| Hydraulic system total | 960 L   |

| SOUND PERFORMANCE                     |           |
|---------------------------------------|-----------|
| Interior Sound Power Level (ISO 6396) | 72 dB(A)  |
| Exterior Sound Power Level (ISO 6395) | 109 dB(A) |

| DRIVE AND BRAKES  |                                 |
|---|---------------------------------|
| Description   |                                 |
| 2-speed axial piston motors with oil disk brakes. Steering controlled by two hand levers with pedals. |                                 |
| Max. travel speed   | High: 4.2 km/h<br>Low: 2.6 km/h |
| Gradeability  | 35°/70%                         |
| Max. drawbar pull   | 650 kN                          |



| DIMENSIONS                           |                      |
|--------------------------------------|----------------------|
| Boom                                 | 7,250 mm             |
| Arm Options                          | 2,925 mm             |
| A Shipping Length                    | 13,757 mm            |
| B Shipping Height – Top of Boom      | 5,228 mm             |
| C Track Gauge                        | *3,510 mm / 2,750 mm |
| D Undercarriage Width – 650 mm shoes | *4,160 mm / 3,400 mm |
| E Length to Center of Rollers        | 5,120 mm             |
| F Track Length                       | 6,360 mm             |
| G Overall Width of Upper Structure   | *4,500 mm            |
| H Tail Swing Radius                  | 4,700 mm             |
| I Counterweight Ground Clearance     | 1,675 mm             |
| J Overall Height of Cab              | 3,746 mm             |
| K Min. Ground Clearance              | 950 mm               |
| L Track Shoe Width                   | 650 mm               |

\* Adjustable gauge

| BOOM DIMENSIONS |          |
|-----------------|----------|
| Description     | Standard |
| Boom            | 7,250 mm |
| Length          | 7,600 mm |
| Height          | 2,560 mm |
| Width           | 1,330 mm |
| Weight          | 9,900 kg |

Cylinder, piping and pin included. Boom cylinder pin excluded.

| ARM DIMENSIONS |                          |
|----------------|--------------------------|
| Description    | Standard                 |
| Arm            | 2,925 mm                 |
| Length         | 4,420 mm                 |
| Height         | 1,710 mm                 |
| Width          | 910 mm<br>with hinge pin |
| Weight         | 5,200 kg                 |

Cylinder, linkage and pin included.

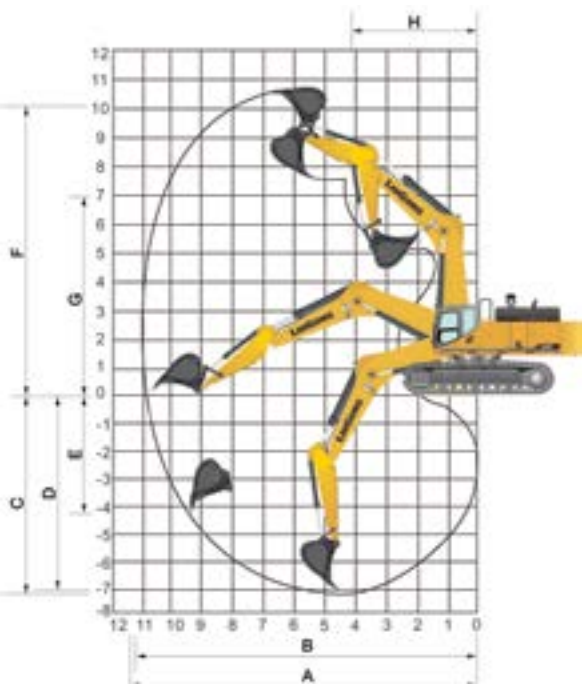
| BUCKET SELECTION GUIDE |          |               |        |           |                            |
|------------------------|----------|---------------|--------|-----------|----------------------------|
| Bucket type            | Capacity | Cutting width | Weight | Teeth pcs | 6.6 m HD Boom<br>2.9 m Arm |
| Heavy duty             | 5.6 m³   | 2,350         | 6,500  | 4         | D                          |

The recommendations are given as a guide only, based on typical operation conditions. Bucket capacity based on ISO 7451, heaped material with a 1: 1 angle of repose.

Maximum material density:  
A. 1,200-1,300 kg/m³ : Coal, Caliche, Shale  
B. 1,400-1,600 kg/m³ : Wet earth and clay, limestone, sandstone  
C. 1,700-1,800 kg/m³ : Granite, wet sand, well blasted rock  
D. 1,900 kg/m³ : Wet mud, Iron ore  
NA. Not applicable

| MACHINE WEIGHTS AND GROUND PRESSURE |  |                 |               |
|-------------------------------------|--|-----------------|---------------|
| Shoe width                          | Operating weight   | Ground pressure | Overall width |
|                                     | 7.25 m boom/2.925 m arm/5.6 m³ bucket/ 12,500 kg counterweight |                 |               |
| 650 mm                              | 93,000 kg  | 120 kPa         | 4,500 mm      |





| WORKING RANGE                            |             |                    |
|--|-------------|--------------------|
| Boom Length                              |             | 7,250 mm           |
| Arm Length                               |             | 2,925 mm           |
| A. Max. Digging Reach                    |             | 12,488 mm          |
| B. Max. Digging Reach on Ground          |             | 12,172 mm          |
| C. Max. Digging Depth                    |             | 7,185 mm           |
| D. Max. Digging Depth, 2.44 m (8') level |             | 7,044 mm           |
| E. Max. Vertical Wall Digging Depth      |             | 5,395 mm           |
| F. Max. Cutting Height                   |             | 12,342 mm          |
| G. Max. Dumping Height                   |             | 7,979 mm           |
| H. Min. Front Swing Radius               |             | 5,415 mm           |
| Bucket Digging Force (ISO)               | Normal      | 472 kN             |
|  | Power Boost | 497 kN             |
| Arm Digging Force (ISO)                  | Normal      | 392 kN             |
|  | Power Boost | 413 kN             |
| Bucket Capacity                          |             | 5.6 m <sup>3</sup> |
| Bucket Tip Radius                        |             | 2,445 mm           |

Lifting capacity at the arm end without bucket.  
For lifting capacity including bucket, weight of the bucket or the bucket with quick coupler must be deducted from the lifting capacities.  
Lifting capacities are based on the machine standing on a firm, uniform supporting surface.



Rating over-front (Cf)



Rating over-side (Cs)

1. Do not attempt to lift or hold any load that is greater than these rated values at their specified load radius and height. Weight of all accessories must be deducted from the above lifting capacities.

2. The rated loads are in compliance with ISO 10567 Hydraulic Excavator Lift Capacity Rating Standard. They do not exceed 87% of hydraulic lifting capacity or 75% tipping load.

3. Ratings at bucket lift hook.
4. Lifting capacities are based on machine standing on level, firm and uniform ground.

5. \*Indicates the load is limited by hydraulic capacity rather than tipping capacity.

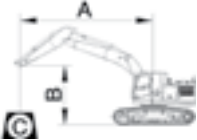
6. Operator should be fully acquainted with the Operator's and Maintenance Instructions before operating this machine and rules for the safe operation of equipment should be adhered to at all times.

LIFTING CAPACITY (METRIC)

650 mm Shoes, 7,250 mm Boom, 2,925 mm Arm

A: Reach from swing center  
B: Bucket hook height  
C: Lifting capacity  
Cf: Rating over front  
Cs: Rating over side

Conditions:  
Boom length: 7250mm one-piece boom  
Arm length: 2925mm  
Shoes: 650mm triple grouser  
Unit: kg



| A (Unit: m)  |        |        |        |        |        |        |        |        |         |         |        |       |        |       |        |       |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-------|--------|-------|--------|-------|
| B (m)        | 3      |        | 4      |        | 5      |        | 6      |        | 7       |         | 8      |       | 9      |       | 10     |       |
|              | Cf     | Cs     | Cf     | Cs     | Cf     | Cs     | Cf     | Cs     | Cf      | Cs      | Cf     | Cs    | Cf     | Cs    | Cf     | Cs    |
| 9            |        |        |        |        |        |        |        |        | *24,850 | *24,850 |        |       |        |       |        |       |
| 8            |        |        |        |        |        |        |        |        | *25090  | *25090  | *23720 | 22300 |        |       |        |       |
| 7            |        |        |        |        |        |        | *28520 | *28520 | *25890  | *25890  | *24020 | 22070 | *19960 | 18230 |        |       |
| 6            |        |        | *44500 | *44500 | *35670 | *35670 | *30500 | *30500 | *27080  | 26530   | *24680 | 21660 | *22950 | 18060 |        |       |
| 5            |        |        |        |        | *39540 | *39540 | *32740 | 32290  | *28450  | 25740   | *25490 | 21170 | *23350 | 17770 |        |       |
| 4            |        |        |        |        |        |        | *34860 | 31010  | *29790  | 24930   | *26320 | 20640 | *23970 | 17440 |        |       |
| 3            |        |        |        |        |        |        | *36400 | 29920  | 30860   | 24190   | *27010 | 20140 | *24150 | 17100 | *20950 | 14730 |
| 2            |        |        |        |        |        |        | *37100 | 29130  | *31470  | 23600   | *27400 | 19710 | *24290 | 16810 | *21200 | 14560 |
| 1            |        |        |        |        | *29130 | *29130 | *36910 | 28630  | *31510  | 23170   | *27830 | 19380 | *24090 | 16580 |        |       |
| GROUND LEVEL |        |        |        |        | *37380 | 37300  | *35900 | 28380  | *30900  | 22910   | *26580 | 19170 | *23420 | 16450 |        |       |
| -1           |        |        | *28890 | *28890 | *39150 | 37370  | *34130 | 28330  | *29580  | 22820   | *25670 | 19100 | *22010 | 16430 |        |       |
| -2           | *30300 | *30300 | *39220 | *39220 | *35770 | *35770 | *31510 | 28440  | *27430  | 22870   | *2360  | 19160 |        |       |        |       |
| -3           | *34750 | *34750 | *34130 | *34130 | *31380 | *31380 | *27850 | *27850 | *24150  | 23110   | *20010 | 19430 |        |       |        |       |
| -4           |        |        | *27330 | *27330 | *25560 | *25560 | *22680 | *22680 | *18920  | *18920  |        |       |        |       |        |       |

STANDARD EQUIPMENT

ENGINE SYSTEM

- Perkins engine, turbocharged, 6 cylinder, 4 stroke, water cooled.
- Radial seal air filters (primary and secondary filter)
- Pre-filter with water separator
- Automatic engine idle stop
- Aspiration, Wastegate Turbo (WGT)
- IPC (Intelligent Power Control) System
- Radiator, oil cooler, and charge air cooling; Hydraulic and direct drive cooling fan
- Engine overheat prevention system
- Engine oil filter
- Oil bath air pre-filter
- Automatic engine idle stop

DRIVETRAIN

- Hydraulic motor, one-piece two-gear piston and reducer
- 2-speed travel system with automatic shift

SWING SYSTEM

- High-torque piston swing motor with integral spring set and automatic hydraulic release swing brake

HYDRAULIC SYSTEM

- Main pump: two variable displacement piston pumps
- Pilot pump: gear
- Cylinders: boom, arm, bucket
- Power boost function
- Swing with anti-reverse function
- Boom and arm regeneration circuits
- Pilot oil filter
- Pilot control shut-off lever
- 3-working mode selection system: Power, Standard, Economy

DIGGING EQUIPMENT

- 7,250mm boom
- 2,925 mm arm
- 5.6 m<sup>3</sup> (SAE, heaped) bucket

OPERATOR STATION

- Pressurized and sealed cab with all-around visibility, front window wiper and removable lower window
- Air conditioner, heater, defroster
- Mechanical suspension seat+ Seat belt
- AM/FM radio (includes auxiliary input)
- Glass-breaking hammer
- Cup holder
- Floor mat
- Storage box
- Fire extinguisher
- One key for all locks
- Emergency stop on ground

INSTRUMENTATION

- Color LCD monitor with alarms, filter/fluid change, fuel rate, water temperature, work mode, fault code, working hour, etc.
- Fuel gauge

ELECTRICAL

- Alternator 115 A
- Batteries 2- (2 x 12) V
- Left and right boom working light,two cab mounted working lights
- Starting, 24 V
- Rear view camera

UNDERCARRIAGE

- 650 mm track-shoes with triple grousers
- Rollers, bottom - 9 each side, top - 3 each side
- Track guard for heavy duty
- Towing eye on base frame

GUARDS

- Belly guards and 8 mm thickness platform bottom plate
- Cover plate under travel frame
- Cab lower window guard and Cab top guard

OTHER STANDARD EQUIPMENT

- 12,500 kg counterweight
- Maintenance tool kit
- Maintenance parts package

OPTIONAL EQUIPMENT



OVERLOADING WARNING



ELECTRIC FUEL REFILLING PUMP



LARGE ROOF WINDOW WITH SLIDE SLIDING SUN VISOR



OPERATION PROTECTION GUARD



HYDRAULIC HAMMER



6.0 m<sup>3</sup> BUCKET



FULL TRACK-GUARDS





LG-PB-WW-990F-24-052021-ENG



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