

Engine

Yanmar 4TNV98C

Net Power

44 kW (59 hp)

Operating Weight

8,600 kg (18,960 lb)

Bucket Capacity

0.28 m³ (0.37 yd³)

908ECR

EXCAVATOR



TOUGH WORLD. TOUGH EQUIPMENT.

The LiuGong 908ECR Excavator delivers high performance, durability and reliability in short tail swing design to ensure safe and easy operation within a confined space.

POWERFUL ENGINE

The fuel efficient, Tier 4 certified Yanmar 4TNV98C engine provides proven and reliable power.

ADVANCED HYDRAULICS

Advanced hydraulic system is perfectly matched to the engine and components for fast response and smooth operation. The hydraulic system provides a load sensing and flow sharing capability leading to operational precision, efficient performance and greater controllability.

BOOM SWING

When it works alongside obstacles, the swing post and cylinder stay within the tracks when in an offset position, so that you can avoid the risk of damage to your machine.

BLADE FLOAT FUNCTION

When you push the lever fully forward into the detent position the float function is enabled. Because you don't have to adjust the blade height during travel, cleanup and backfilling will be easier.

SIMPLY MULTIFUNCTIONAL

Switching attachments like buckets, breakers and shears can be time consuming and hazardous. We've made it fast, safe and simple with LiuGong's quick coupler and powerlatch tilt coupler. These are perfectly matched to a range of genuine LiuGong attachments including; buckets and breakers which can be changed from the seat of the cab in less than a minute, quick, safe and easy.

COMFORTABLE OPERATION ENVIRONMENT

Ergonomically designed controls, clear visibility and convenient features all contribute to operator comfort and overall productivity on the job site.

SHORT TAIL SWING

The 908ECR model features a short tail swing design. On this model, if you are working in a confined space the short tail swing ensures safe and easy operation within a confined space.





SPECIFICATIONS

Operating weight 8,600 kg (18,960 lb)

Operating weight includes coolant, lubricants, full fuel tank, cab, standard shoes, boom, arm, bucket and operator 75 kg (165 lb).

Bucket capacity 0.28 m³ (0.37 yd³)

ENGINE

Description

Cummins EPA Tier 4, 6-cylinder, high pressure common rail, electronically controlled direct injection. Cooling system: Charge air cooler.

Emission rating	Tier 4
Engine manufacturer	Yanmar
Engine model	4TNV98C
Aspiration	Natural
Charged air cooling	Aftercooler
Cooling fan drive	Direct
Displacement	3.3 L (202 gal)
Rated speed	2,200 rpm
Engine output - net (SAE J1349 / ISO 9249)	44 kW (59 hp)
Engine output - gross (SAE J1995 / ISO 14396)	46.2 kW (62 hp)
Maximum torque	241 N·m (178 lbf·ft) @1,430 rpm
Bore × Stroke	98×110 mm (3.86" × 4.33")

DRIVE AND BRAKES

Description

2-speed drive motors allow auto speed shifting. Each motor is equipped with a hydraulic released, spring applied parking brake.

Max. travel speed	High: 4.8 km/h (3 mph) Low: 2.4 km/h (1.5 mph)
Gradeability	30°/58%
Max. drawbar pull	75 kN (16,861 lb)

SWING SYSTEM

Description

Planetary gear reduction driven by high torque axial piston motor with spring applied parking brake; Hydraulic oil lubricate.

Swing speed	10.5 rpm
Swing torque	21,000 N·m (15,489 lbf·ft)

HYDRAULIC SYSTEM

Main pump

Type	Variable displacement piston pump
Maximum flow	196 L/min (51.8 gal/min)

Relief valve setting

Implement	28 MPa (4,061 psi)
Travel circuit	31.4 MPa (4,554 psi)
Slew circuit	28 MPa (4,061 psi)
Pilot circuit	3.9 MPa (566 psi)

Hydraulic cylinders

Boom Cylinder – Bore × Stroke	Φ110 × 879 mm Φ4.33" × 34.61"
Stick Cylinder – Bore × Stroke	Φ100 × 867 mm Φ3.94" × 34.13"
Bucket Cylinder – Bore × Stroke	Φ90 × 710 mm Φ3.54" × 27.95"

UNDERCARRIAGE

Track shoe each side	39
Link pitch	154 mm (6.1")
Shoe width, triple grouser	450 mm (18")
Bottom rollers each side	6
Top rollers each side	1

ELECTRIC SYSTEM

System Voltage	12 V
Battery	12 V
Alternator	12 V - 55 A
Start motor	12 V - 3 kW (4 hp)

SERVICE CAPACITIES

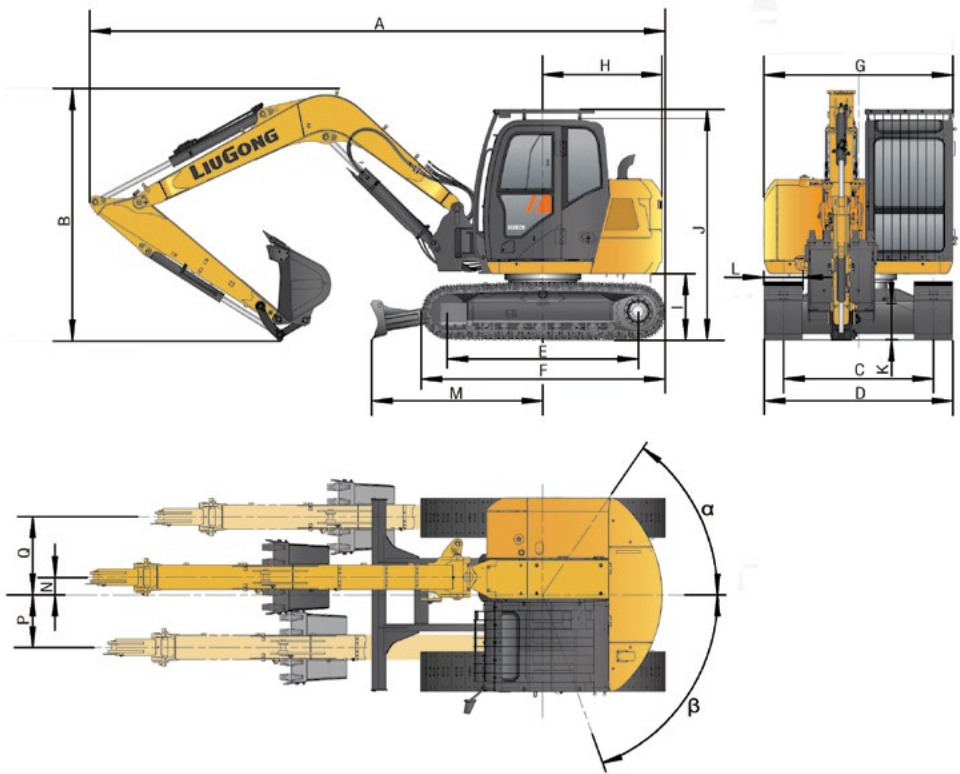
Fuel tank	116 L (30.6 gal)
Engine oil	11.6 L (3.1 gal)
Final drive (each)	1.08 L (0.29 gal)
Swing drive	1.6 L (0.42 gal)
Cooling system	14.5 L (3.8 gal)
Hydraulic reservoir	72 (19.0 gal)
Hydraulic system total	110 (29.1 gal)

SOUND PERFORMANCE

Interior Sound Power Level (ISO 6396)	75 dB(A)
Exterior Sound Power Level (ISO 6395)	98 dB(A)

MACHINE WEIGHTS AND GROUND PRESSURE

Operating weight	8,600 kg (18,960 lb)
Shoe width	450 mm (18")
Boom	3,375 mm (11'1")
Arm	1,650 mm (5'5")
Bucket	0.28 m³ (0.37 yd³)
Counterweight	1400 kg (3,086 lb)
Ground pressure	37.8 kPa (5.5 psi)



DIMENSIONS

Boom	3,375 mm (11'1")	
Arm Options	1,650 mm (5'5")	2,100 mm (6'11")
A Shipping Length	6,460 mm (21'2")	
B Shipping Height – Top of Cab	2,730 mm (8'11")	
C Track Gauge	1,750 mm (5'9")	
D Undercarriage Width – with 300 mm Shoes	2,200 mm (7'3")	
E Length to Center of Rollers	2,230 mm (7'4")	
F Track Length	2,845 mm (9'4")	
G Overall Width of Upper Structure	2,200 mm (7'3")	
H Tail Swing Radius	1,410 mm (4'8")	
I Counterweight Ground Clearance	760 mm (2'6")	
J Overall Height of Cab	2,800 mm (9'2")	
K Min. Ground Clearance	360 mm (1'2")	
L Track Shoe Width	450 mm (18")	
M Dozer blade, maximum reach at ground level	2,033 mm (6'8")	
N Offset	200 mm (8")	
O Maximum boom offset to the right	886 mm (2'11")	
P Maximum boom offset to the left	598 mm (2')	
α Maximum boom swing angle to the right	55°	
β Maximum boom swing angle to the left	70°	

BOOM DIMENSIONS

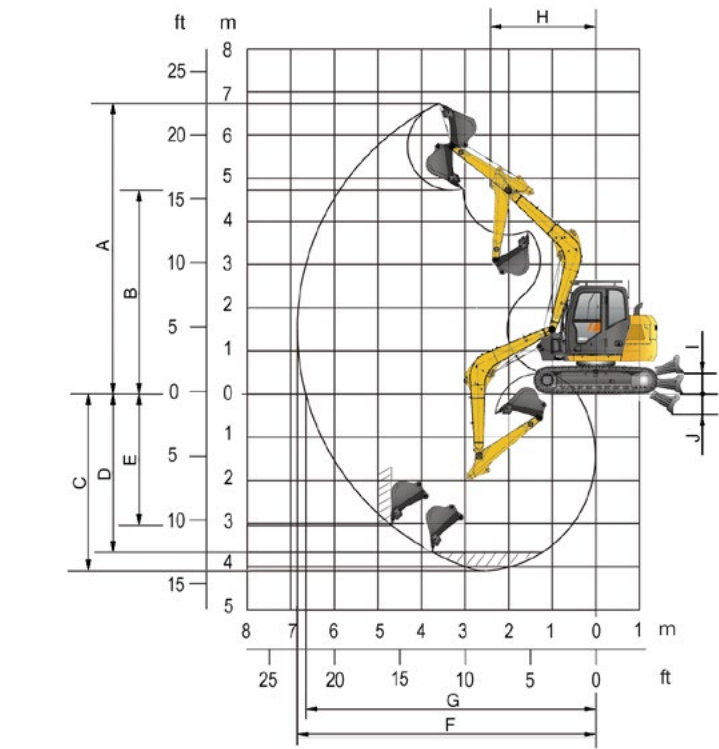
Boom	3,375 mm (11'1")
Length	3,510 mm (11'6")
Height	1,236 mm (4'1")
Width	424 mm (1'5")
Weight	435 kg (959 lb)

Only boom.

ARM DIMENSIONS

Arm	1,650 mm (5'5")	2,100 mm (6'11")
Length	2,205 mm (7'3")	2,660 mm (8'9")
Height	510 mm (1'8")	510 mm (1'8")
Width	220 mm (10")	244 mm (9")
Weight	165 kg (364 lb)	210 kg (463 lb)

Only arm.



WORKING RANGE	
Boom	3,375 mm (11'1")
Arm Options	1,650 mm (5'5")
A. Max. cutting height	6,724 mm (22'1")
B. Max. dumping height	4,725 mm (15'6")
C. Max. digging depth	4,093 mm (13'5")
D. Max. vertical wall digging depth	3,043 mm (10')
E. Max. digging depth 2.44 m (8') level	3,670 mm (12')
F. Max. digging reach	6,847 mm (22'6")
G. Max. digging reach on ground	6,651 mm (21'10")
H. Min. front swing radius	2,421 mm (7'11")
i. Max blade lift	470 mm (1'7")
J. Max blade depth	510 mm (1'8")
Bucket Digging Force (ISO)	63 kN (14,163 lbf)
Stick Digging Force (ISO)	43 kN (9,667 lbf)
Bucket Capacity	0.28 m³ (0.37 yd³)
Bucket Tip Radius	1,020 mm (3'4")

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.



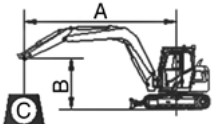
1. Do not attempt to lift or hold any load that is greater than these rated values at their specified load radius and height. Weight of all accessories must be deducted from the above lifting capacities.
2. The rated loads are in compliance with ISO 10567 Hydraulic Excavator Lift Capacity Rating Standard. 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)

908ECR with 450 mm shoes, 1,650 mm arm (Standard)

Conditions

- A: Reach from swing center
B: Bucket hook height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side
- Boom length: 3,375 mm one-piece boom
Arm length: 1,650 mm
Bucket: 0.28 m³
Shoes: 450 mm
Unit: kg



Blade: Down											
A (Unit: m)											
B (m)	2		3		4		5		MAX REACH		
											A (m)
4					*1,770	1,770	*1,850	1,290	*1,870	1,250	5.1
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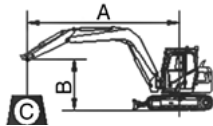
Blade: Up											
A (Unit: m)											
B (m)	2		3		4		5		MAX REACH		A (m)
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	
4					1,770	1,770	1,320	1,290	1,280	1,250	5.1
3			2,670	2,670	1,850	1,810	1,300	1,260	1,080	1,050	5.6
2			2,680	2,600	1,750	1,700	1,250	1,220	990	970	5.8
1			2,520	2,440	1,650	1,610	1,200	1,170	970	950	5.8
0			2,490	2,410	1,610	1,560	1,180	1,140	1,010	990	5.6
- 1	5,590	5,370	2,500	2,430	1,600	1,560	1,180	1,140	1,140	1,110	5.1
-2	5,690	5,470	2,560	2,490	1,640	1,600			1,480	1,440	4.3











LIFTING CAPACITY (IMPERIAL)

908ECR with 18" shoes, 5'5" arm (Standard)

Conditions

- A: Reach from swing center
B: Bucket hook height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side
- Boom length: 11'1" one-piece boom
Arm length: 5'5"
Bucket: 0.37 yd³
Shoes: 18"
Unit: lb



Blade: Down											
A (Unit: ft)											
B (ft)	6'6"		10'		13'1"		16'4"		MAX REACH		
											A (ft)
13'1"					*3,903	3,903	*4,079	2,844	*4,123	2,756	16.7
10'			*5,887	5,887	*4,741	3,991	*4,300	2,778	*4,278	2,315	18.3
6'6"			*9,371	5,733	*5,998	3,749	*4,851	2,690	*4,476	2,139	19.0
3'3"			*11,422	5,380	*7,100	3,550	*5,402	2,580	*4,675	2,095	19.0
0			*11,598	5,314	*7,651	3,440	*5,711	2,514	*4,983	2,183	18.3
-3'3"		11,841	*10,981	5,358	*7,541	3,440	*5,535	2,514	*5,314	2,448	16.8
-6'6"		12,061	*9,393	5,490	*6,483	3,528			*5,689	3,175	14.2

Blade: Up											
A (Unit: ft)											
B (ft)	6'6"		10'		13'1"		16'4"		MAX REACH		
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (ft)
13'1"					3,903	3,903	2,911	2,844	2,822	2,756	16.7
10'			5,887	5,887	4,079	3,991	2,867	2,778	2,381	2,315	18.3
6'6"			5,909	5,733	3,859	3,749	2,756	2,690	2,183	2,139	19.0
3'3"			5,557	5,380	3,638	3,550	2,646	2,580	2,139	2,095	19.0
0			5,490	5,314	3,550	3,440	2,602	2,514	2,227	2,183	18.3
-3'3"	12,326	11,841	5,513	5,358	3,528	3,440	2,602	2,514	2,514	2,448	16.8
-6'6"	12,546	12,061	5,645	5,490	3,616	3,528			3,263	3,175	14.2

BUCKET SELECTION GUIDE

3.375 m (11'1") Boom					
Bucket type	Capacity	Cutting width	Weight	Teeth pcs	
General purpose	0.28 m³ (0.37 yd³)	765 mm (2'6")	221 kg (487 lb)	4	
				A	B

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 (2,023~2,191 lb/yd³): Coal, Caliche, Shale
 - B 1,400~1,600 kg/m³ (2,360~2,697 lb/yd³): Wet earth and clay, limestone, sandstone
 - C 1,700~1,800 kg/m³ (2,865~3,034 lb/yd³): Granite, wet sand, well blasted rock
 - D 1,900 kg/m³ (3,203 lb/yd³): Wet mud, Iron ore
 - NA. Not applicable

STANDARD EQUIPMENT

ENGINE SYSTEM

- Yanmar engine 4TNV98C, EPA Tier 4/EU Stage IIIB, 4 cylinder, 4 stroke, water cooled, common rail, EGR, DPF
- Air filter
- Pre-filter with water separator
- Auto-idle speed control
- Natural aspiration
- Radiator, oil cooler, and charge air cooler - after cooler. Direct drive cooling fan
- Engine overheat prevention system
- Engine oil filter

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

DIGGING EQUIPMENT

- 3,375 mm (11'1") boom
- 1,650 mm (5'5") arm
- 0.28 m³ (0.37 yd³, SAE, heaped) bucket

HYDRAULIC SYSTEM

- Main pump: one variable displacement piston pump
- Pilot pump: gear
- Cylinders: boom, stick, bucket
- Swing with anti-reverse function
- Boom and arm regeneration circuits
- Pilot oil filter
- Load holding valve
- Pilot control shut-off lever
- 2-working mode selection system: Power, Economy

OPERATOR STATION

- Pressurized and sealed cab with all-around visibility, large roof window with slide sliding sun visor, front window wiper and removable lower window
- Air conditioner, heater, defroster
- Mechanical suspension seat
- AM/FM radio
- Glass-breaking hammer
- Cigarette lighter
- Cup holder
- Floor mat
- Storage box
- Fire extinguisher
- One key for all locks

INSTRUMENTATION

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

ELECTRICAL

- Alternator 70 A
- Dual batteries 12 V
- Working lights, 1 frame mounted, 2 boom mounted
- Starting, 12 V

UNDERCARRIAGE

- 450 mm (18") track-shoes with triple grousers
- Rollers, bottom - 6 each side, top - 1 each side
- Towing eye on base frame

GUARDS

- Cover plate under travel frame

OTHER STANDARD EQUIPMENT

- Counterweight, 1,400 kg (3,086 lb)
- Maintenance tool kit
- Maintenance parts package

OPTIONAL EQUIPMENT

HYDRAULIC SYSTEM

- Hydraulic attachments rotation lines
- Overloading warning
- Hose burst safety valves, prevention of boom or arm supply dropped when the lines split.
- Dual way auxiliary lines
- Quick coupler lines (low and high pressure)

OPERATOR STATION

- Operation protection guard (included cab front and top guard, bar)
- Operation protection screen (on cab front, net)
- Operation protection screen (front-lower)
- Roll-Over Protective System (ROPS)
- Rain visor
- Mechanic heated suspension seat
- Mechanic suspension seat

ELECTRICAL

- LED working lights on cab, 4 front and 2 rear
- Rearview camera
- Travel alarm
- Rotating beacon
- 4 boom working lights
- Working lights, 2 cab mounted

UPPER STRUCTURE

- Upper frame protection (wire)
- 8 mm thickness platform bottom plate

UNDERCARRIAGE

- 450 mm (18") track-shoes with triple grousers
- 1 piece track-guard (each side)

DIGGING EQUIPMENT

- Arm: 2,100 mm (6'11")

ADDITIONAL OPTIONS

- Refuelling pump
- Oil bath pre-cleaner



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