

LIUGONG

923FN EXCAVATOR

ALL NEW
FSERIES

Engine	Cummins B6.7
Net Power	116 kW (156 hp)
Operating Weight	23,500 kg
Bucket Capacity	0.9-1.1 m ³



TOUGH WORLD. TOUGH EQUIPMENT.



SPECIFICATIONS

Operating weight 23,500 kg (51,890 lbs)

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

Bucket capacity 0.9 - 1.4 m³ (1.18-1.44 yd³)

ENGINE

Description

Cummins EU Stage V / EPA Tier 4 final, 6-cylinder straight Variable-Geometry Turbocharger (VGT), high pressure common rail, electronically controlled direct injection. Air cleaner: Cummins direct flow air filter. Cooling system: Air-to-air intercooler

Emission rating	EU Stage V / EPA Tier 4 final,
Engine manufacturer	Cummins
Engine model	B6.7
Aspiration	Variable-Geometry Turbocharger (VGT)
Charged air cooling	After cooler
Cooling fan drive	Electric motor
Displacement	6.7 L (6,700 cm ³) 1.8 gal (409 In ³)
Rated speed	2,200 rpm
Engine output - net (SAE J1349 / ISO 9249)	116 kW (156 hp)
Engine output - gross (SAE J1995 / ISO 14396)	116 kW (156 hp)
Maximum torque	746 N·m @ 1,300 rpm (550 lbf·ft @ 1,300 rpm)
Bore × Stroke	107 × 124 mm (4.2" × 4.9" in)

UNDERCARRIAGE

Track shoe each side	49
Link pitch	190 mm (7.5")
Shoe width, triple grouser	550 mm (22")
Bottom rollers each side	8
Top rollers each side	2

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	10.5 rpm
Swing torque	78,200 N·m (57,680 lbf·ft)

HYDRAULIC SYSTEM

Main pump

Type	Two variable displacement piston pumps
Maximum flow	2 × 228 L/min (2×60.2 gal/mi)

Pilot pump

Type	Gear pump
Maximum flow	17.5 L/min (5 gal/mi)

Relief valve setting

Implement	34.3/37.3 MPa (4,973 / 5,408 psi)
Travel circuit	34.3 MPa (4,974 psi)
Slew circuit	27.6 MPa (4,002 psi)
Pilot circuit	3.9 MPa (566 psi)

Hydraulic cylinders

Boom Cylinder – Bore × Stroke	φ120 × 1,320 mm (φ4.7"×4'4" ft/in)
Arm Cylinder – Bore × Stroke	φ135 × 1,490 mm (φ5.3"×5'4" ft/in)
Bucket Cylinder – Bore × Stroke	φ115 × 1,120 mm

ELECTRIC SYSTEM

System Voltage	24 V
Batteries	2 × 12 V
Alternator	24 V - 180 A
Starter motor	24 V - 7.8 kW (24 V - 10 hp)

SERVICE CAPACITIES

Fuel tank	320 L (84.5 gal)
Engine oil	25 L (6.6 gal)
Final drive (each)	5.5 L (1.5 gal)
Swing drive	3.4 L (0.9 gal)
Cooling system	25 L (6.6 gal)
Hydraulic reservoir	165 L (43.6 gal)
Hydraulic system total	280 L (74 gal)
DEF Tank	25 L (6.6 gal)

SOUND PERFORMANCE

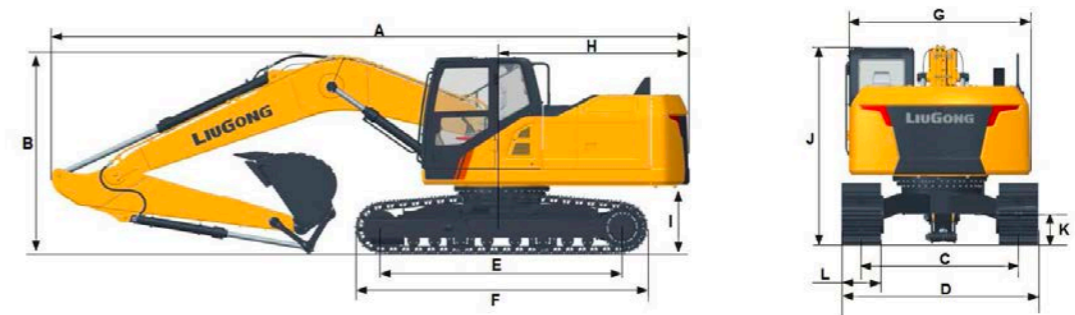
Interior Sound Power Level (ISO 6396)	68 dB(A)
Exterior Sound Power Level (ISO 6395)	99 dB(A)

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: 5.6 km/h (3.5 mph) Low: 3.3 km/h (2.0 mph)
Gradeability	35%/70%
Max. drawbar pull	220 kN (49,458 lbs)



DIMENSIONS (METRIC)

Boom Length	5,710 mm (18'9")	5,710 (18'9")
Arm Length	2,915 mm (9'7")	2,400 (7'10")
A Shipping Length	9,620 mm (31'7")	9,660 (31'8")
B Shipping Height (Top of Boom hose)	3,000 mm (9'10")	3,275 (10'9")
C Track Gauge	1,990 mm (6'6")	1,990 mm (6'6")
D Undercarriage Width– 550 mm (22") shoes	2,540 mm (8'4")	2,540 mm (8'4")
E Length to Center of Rollers	3,650 mm (11'12")	3,650 mm (11'12")
F Track Length	4,445 mm (14'7")	4,445 mm (14'7")
G Overall Width of Upper Structure	2,540 mm (8'4")	2,540 mm (8'4")
H Tail Swing Radius	2,850 mm (9'4")	2,850 mm (9'4")
I Counterweight Ground Clearance	1,110 mm (3'8")	1,110 mm (3'8")
J Overall Height of Cab	3,050 mm (10')	3,050 mm (10')
K Min. Ground Clearance	530 mm (1'9")	530 mm (1'9")
L Track Shoe Width	550 mm (1'10")	550 mm (1'10")
J (i) Height of Cab Including Lighting Halo	3,050 mm (10')	3,050 mm (10')
J (ii) Height of Cab Including FOPS Guard	3,170 mm (10'5")	3,170 mm (10'5")



BOOM DIMENSIONS

Boom	5,710 mm (18'9")
Length A	5,898 mm (19'4")
Height B	1,690 mm (5'7")
Width C	622 mm (2'0")
Width D	788 mm (2'7")
Weight	2,070 kg (4,564 lbs)

Includes arm cylinder, piping and pin.

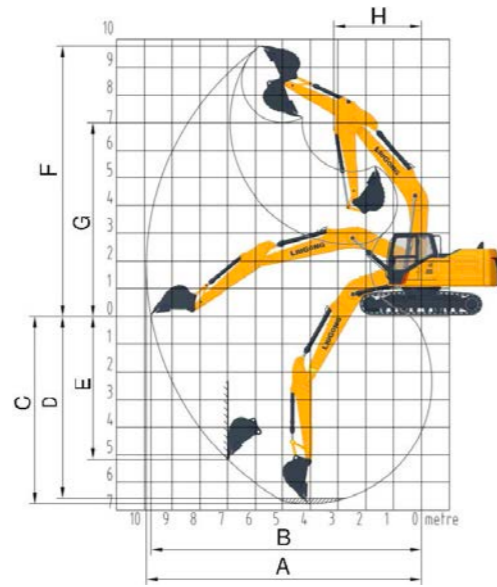
ARM DIMENSIONS

Arm	2,915 mm (9'7")	2,400 mm (7'10")
Length A	3,918 mm (12'10")	3,380 mm (11'1")
Height B	826 mm (2'9")	800 mm (2'7")
Width C	476 mm (1'7")	476 mm (1'7")
Weight	1,115 kg (2,458 lbs)	1,025 kg (2,260 lbs)

Includes bucket cylinder, linkage and pin.

MACHINE WEIGHTS AND GROUND PRESSURE

923FN			
Shoe width	Operating weight	Ground pressure	Overall width
	5.71 m (18'9") boom, 2.915 m (9'7") arm, 1.0 m ³ (1.3yd ³) bucket, 5,000 kg (11,023 lbs) counterweight		
550 mm (1'10")	23,500 kg (51,809 lbs)	54.3 kPa (7.9 psi)	2,540 mm (8'4")



WORKING RANGE			
Boom Length	5,710 mm (18'9")	5,710 mm (18'9")	
Arm Length	2,915 mm (9'7")	2,400 mm (7'10")	
A. Max. Digging Reach	9,870 mm (32'5")	9,540 mm (31'4")	
B. Max. Digging Reach on Ground	9,720 mm (31'11")	9,360 mm (30'9")	
C. Max. Digging Depth	6,725 mm (22'1")	6,250 mm (20'6")	
D. Max. Digging Depth, 2.44 m (8') Level	6,525 mm (21'5")	6,045 mm (19'10")	
E. Max. Vertical Wall Digging Depth	5,125 mm (16'10")	5,260 mm (17'3")	
F. Max. Cutting Height	9,790 mm (32'1")	9,815 mm (32'2")	
G. Max. Dumping Height	7,020 mm (23')	7,025 mm (23'1")	
H. Min. Front Swing Radius	3,135 mm (10'3")	3,210 mm (10'6")	
Bucket Digging Force (ISO)	Normal	140 KN (31,473 lbf)	146 KN (32,822 lbf)
	Power Boost	152.5 KN (34,283 lbf)	159.5 KN (35,857 lbf)
Arm Digging Force (ISO)	Normal	97 KN (21,694 lbf)	115 KN (25,853 lbf)
	Power Boost	105 KN (23,605 lbf)	126 KN (28,326 lbf)
Bucket Capacity	1.0 m ³ (1.31 yd ³)	1.1 m ³ (1.44 yd ³)	
Bucket Tip Radius	1,478 (4'10")	1,478 mm (4'10")	

BUCKET SELECTION GUIDE						
Bucket type	Capacity	Cutting width mm (ft)	Weight kg (lbs)	Teeth EA	5.71 m Boom	
	m ³				2.915 m (9'7") arm	2.4 m (7'10") arm
Earth type	0.93 (1.22 yd ³)	1,140 (3'9")	734 (1,618 lbs)	5	B	B
Earth type	1.0 (1.31 yd ³)	1,220 (4'0")	789 (1,739 lbs)	5	B	B
Earth type	1.1 (1.44 yd ³)	1,290 (4'3")	816 (1,894 lbs)	5	B	B
General type	1.0 (1.31 yd ³)	1,200 (3'11")	859 (1,975 lbs)	5	D	D
General type	1.1 (1.44 yd ³)	1,260 (4'2")	896 (1,975 lbs)	5	C	D
Rock type	1.0 (1.31 yd ³)	1,300 (4'3")	1,015 (2,238 lbs)	5	D	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

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.



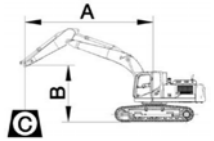
- Do not attempt to lift or hold any load that is greater than these rated values at their specified load radius and height. Weight of all accessories must be deducted from the above lifting capacities.
- The rated loads are in compliance with ISO 10567 Hydraulic Excavator Lift Capacity Rating Standard. They do not exceed 87% of hydraulic lifting capacity or 75% tipping load.
- Ratings at bucket lift hook.
- Lifting capacities are based on machine standing on level, firm and uniform ground.
- *Indicates the load is limited by hydraulic capacity rather than tipping capacity.
- 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)

923FN with 550 mm shoes, 2,915 mm arm

Conditions

Boom length: 5,710mm
 Arm length: 2,915mm
 Bucket: None
 Counterweight: 5,000 kg
 Shoes: 550 mm triple grouser
 Unit: kg

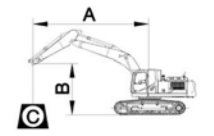


B (m)	A (Unit: m)										MAX REACH		A	
	3		4.5		6		7.5		8		Cf	Cs		
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs				
7.5	kg					*4,260	*4,260					*3,916	*3,916	6.1
6	kg					*4,596	*4,596					*3,858	3,702	7.2
4.5	kg			*5,788	*5,788	*5,085	4,808	*4,781	3,418			*3,843	3,135	7.9
3	kg			*7,468	6,722	*5,860	4,542	*5,117	3,304	*4,978	2,997	*3,791	2,826	8.3
1.5	kg			*9,048	6,166	*6,666	4,272	*5,520	3,171	*5,274	2,898	*3,935	2,700	8.4
0	kg	*6,062	*6,062	*9,923	5,853	*7,249	4,075	*5,823	3,066	5,482	2,820	*4,467	2,730	8.2
-1.5	kg	*10,205	*10,205	*10,051	5,753	*7,440	3,983	*5,835	3,026			*5,446	2,933	7.7
-3	kg	*13,464	10,443	*9,476	5,802	*7,058	4,006					*6,012	3,452	6.8
-4.5	kg	*10,941	10,806	*7,839	6,013							*6,316	4,768	5.4

923FN with 550 mm shoes, 2,400 mm arm

Conditions

Boom length: 5,710 mm
 Arm length: 2,400 mm
 Bucket: None
 Counterweight: 5,000 kg
 Shoes: 550 mm triple grouser
 Unit: kg



B (m)	A (Unit: m)										Max Reach		A	
	3		4.5		6		7.5		8		Cf	Cs		
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs				
7.5	kg											*5,312	*5,312	5.6
6	kg							*5,159	4,905			*5,216	4,016	6.8
4.5	kg			*9,187	*9,187	*6,590	*6,590	*5,614	4,754			*5,274	3,401	7.5
3	kg					*8,306	6,598	*6,364	4,521	*5,519	3,321	*5,411	3,074	7.9
1.5	kg					*9,721	6,155	*7,100	4,299	*5,852	3,220	*5,589	2,949	8
0	kg					*10,292	5,956	*7,557	4,154	*6,042	3,149	5,842	3,048	7.7
-1.5	kg	*6,456	*6,456	*9,881	*9,881	*10,128	5,928	*7,562	4,109			*6,128	3,304	7.2
-3	kg	*13,278	*13,278	*12,672	10,840	*9,219	6,024	*6,808	4,184			*6,328	3,958	6.3
-4.5	kg					*6,773	6,311					*6,372	5,976	4.7



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)

- 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.
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- Ratings at bucket lift hook.
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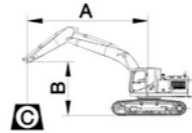
LIFTING CAPACITY (IMPERIAL)

923FN with 22" shoes, 9'7" arm

A: Load radius
B: Load point height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side

Conditions

Boom length: 18'9"
Arm length: 9'7" mm
Bucket: None
Counterweight: 11,023 lbs
Shoes: 22" mm triple grouser
Unit: lbs



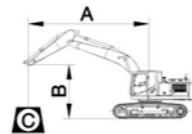
B (ft)	A (Unit: ft)												A	
	10		15		20		25		26		Max Reach			
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs		
25	lb					*9,393	*9,393					*8,632	*8,632	20
20	lb					*10,133	*10,133					*8,506	8,162	24
15	lb			*12,760	*12,760	*11,209	10,599	*10,541	7,536			*8,473	6,912	26
10	lb			*16,464	14,819	*12,920	10,013	*11,281	7,285	*10,974	6,606	*8,358	6,231	27
5	lb			*19,947	13,593	*14,696	9,417	*12,170	6,992	*11,628	6,388	*8,676	5,953	28
0	lb	*13,365	*13,365	*21,876	12,903	*15,981	8,983	*12,838	6,760	12,086	6,216	*9,847	6,019	27
-5	lb	*22,498	*22,498	*22,160	12,683	*16,402	8,781	*12,864	6,670			*12,006	6,466	25
-10	lb	*29,682	23,023	*20,890	12,792	*15,560	8,832					*13,253	7,611	22
-15	lb	*24,122	23,824	*17,283	13,255							*13,925	10,511	18

923FN with 22" shoes, 7'10" arm

A: Load radius
B: Load point height
C: Lifting capacity
Cf: Rating over front
Cs: Rating over side

Conditions

Boom length: 18'9"
Arm length: 7'10" mm
Bucket: None
Counterweight: 11,023 lbs
Shoes: 22" triple grouser
Unit: lbs



B (ft)	A (Unit: ft)												A	
	3		4.5		6		7.5		8		Max Reach			
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs		
25	lb											*11,712	*11,712	18
20	lb							*11,373	10,813			*11,500	8,853	22
15	lb			*20,254	*20,254	*14,529	*14,529	*12,376	10,481			*11,627	7,498	25
10	lb					*18,311	14,547	*14,031	9,967	*12,168	7,322	*11,929	6,777	26
5	lb					*21,431	13,569	*15,654	9,478	*12,901	7,098	*12,321	6,502	26
0	lb					*22,691	13,131	*16,660	9,159	*13,321	6,943	12,880	6,720	25
-5	lb	*14,233	*14,233	*21,784	*21,784	*22,329	13,069	*16,672	9,059			*13,509	7,284	24
-10	lb	*29,274	*29,274	*27,936	23,899	*20,324	13,281	*15,009	9,225			*13,952	8,727	21
-15	lb					*14,931	13,914					*14,048	13,175	15

STANDARD EQUIPMENT

ENGINE SYSTEM

- Cummins B6.7 engine
- Engine overheat prevention system
- Auto-idle speed control
- Auto engine shutdown
- Air filter with integrated pre-cleaner
- Fuel pre-filter with water separator and water detection
- 6 reversible, variable-speed fans
- Cold start kit (-20° C)
- Electric refueling pump with auto shutoff

HYDRAULIC SYSTEM

- Full electronic controlled hydraulic system
- 3-power modes (Power, Standard and Economy)
- Automatic Power boost function
- Boom and arm holding valves
- 2-speed travel with auto-shift
- Monitor controlled eletro-proportional single/dual way circuits with adjustable flow & pressure

OPERATOR STATION

- ROPS certified cab
- Roof window with sun visor
- Heated air suspension seat with headrest)
- 3-inch retractable seat belt
- 8-inch LCD touch screen
- Air conditioning, heating, and defrosting
- Fire extinguisher
- Safety hammer
- Green safety glass
- Interior lighting

ELECTRICAL SYSTEM

- Front windshield wiper with intermittent setting
- Keyless start
- AM/FM radio with USB Input and bluetooth
- Work lights with turn-off delay (4 boom lights, 2 counterweight lights, and LED front and rear work lights – 4 front, 2 rear
- Battery disconnect switch
- Emergency brake

- Attachment flow password protection function
- Attachment flow and pressure history record
- Warnings: overload alarm, rotating beacon, travel alarm, quick-coupler warning, and seatbelt warning
- 360° camera
- T-BOX

UNDERCARRIAGE

- 550mm track-shoes with triple grousers
- Track roller - 8 each side
- Carrier roller, top - 2 each side
- Track guards - 3 each side

UPPER STRUCTURE

- Frame handrail
- Punched metal anti-slip plates
- Foot rest access panel in engine room
- Engine chamber and main pump chamber separated by fire board
- Standard frame undercover
- Side door brace automatically lock
- One key for all locks
- Rearview mirror mounted in the RH machine
- Rearview mirror mounted in the LH cab
- 4,000kg counterweight

DIGGING EQUIPMENT

- 5,710 mm boom
- 2,915 mm arm

SERVICE & MAINTENANCE

- Maintenance tool kit
- Maintenance parts package
- Data diagnostic port
- Self-diagnostic system

OPTIONAL EQUIPMENT

HYDRAULIC SYSTEM

- Proportional joystick control with attachment rotating lines
- Attachment oil drain line
- Boom float function
- Bucket cylinder guard

UNDERCARRIAGE

- Full length track guard

DIGGING EQUIPMENT

- 2,400mm short reach arm

ATTACHMENT

- Hydraulic quick coupler
- 1.1m³ HD loading bucket
- 1.1 m³ GP Bucket
- 1.2 m³ GP Bucket
- 1.3 m³ GP Bucket

OPERATOR STATION

- FOPS Level II Cabin Guard (Front Screen and Roof)
- Front window rain visor

ELECTRICAL SYSTEM

- Machine startup password
- LED strips front/rear working lights

UPPER STRUCTURE

- Guard fence of upper frame around-steel



LG-PB-EU-923FN-spec-8-012024-ENG



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