MINIESCAVATORE

LIUGONG 9035F

NOVITAL

Operating weight	**3,540 kg (7,804 lbs)-Canopy 3,800 kg (8,377 lbs)-Cab**

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

Bucket capacity	**0.11 m³ (0.144 yd³)**

ENGINE

Description	
4-cylinder straight four strokes, Turbo and common rail	
Emission rating	EPA Tier 4F / EU Stage V
Engine manufacturer	Yanmar
Engine model	3TNV88F-ESLY
Aspiration	Natural
Cooling fan drive	Direct
Displacement	1.64 L (0.43 gal)
Rated speed	2,200 rpm
Engine output - net	17.3 kW (23.2 hp)
Engine output - gross	18.2 kW (24.4 hp)
Maximum torque	94.2 N·m (69.5 lbf·ft) @1,320 rpm
Bore × Stroke	88 × 90 mm (3.46" × 3.5")

UNDERCARRIAGE

Track shoe pitchs	44
Shoe width, triple grouser	300 mm (12")
Bottom rollers each side	4
Top rollers each side	1

SWING SYSTEM

Description	
Planetary gear reduction driven by high torque axial piston motor with spring applied parking brake; Hydraulic oil lubricate.	
Swing speed	10 rpm
Swing torque	8,009 N·m (5,907 lbf·ft)

HYDRAULIC SYSTEM

Main pump	
Type	Variable displacement piston pump
Maximum flow	99 L/min (26.2 gal/min)
Relief valve setting	
Implement	25.3 MPa (3,669 psi)
Travel circuit	24.5 MPa (3,553 psi)
Slew circuit	20.6 MPa (2,988 psi)
Pilot circuit	3.5 MPa (508 psi)
Hydraulic cylinders	
Boom cylinder – Bore × Stroke	φ90 × 507 mm (φ3.5" × 1'8")
Arm cylinder – Bore × Stroke	φ80 × 590 mm (φ3.2" × 1'11")
Bucket cylinder – Bore × Stroke	φ70 × 465 mm (φ2.8" × 1'6")
Dozer Cylinder – Bore×Stroke	φ100 ×142 mm (φ3.9" × 5.6")
Swing Cylinder – Bore×Stroke	φ80 × 400 mm (φ3.1" × 1'4")

ELECTRIC SYSTEM

System voltage	12 V
Batteries	12V
Alternator	12 V-55 A
Start motor	12 V-1.7 kW (2.3 hp)

SERVICE CAPACITIES

Fuel tank	55 L (14.53 gal)
Engine oil	6.7 L (1.77 gal)
Cooling system	7 L (1.85 gal)
Hydraulic reservoir	42 L (11.1 gal)
Hydraulic system total	58 L (15.3 gal)

SOUND PERFORMANCE

Interior sound power level (ISO 6396)	78 dB(A)
Exterior sound power level (ISO 6395)	94 dB(A)

DRIVE AND BRAKES

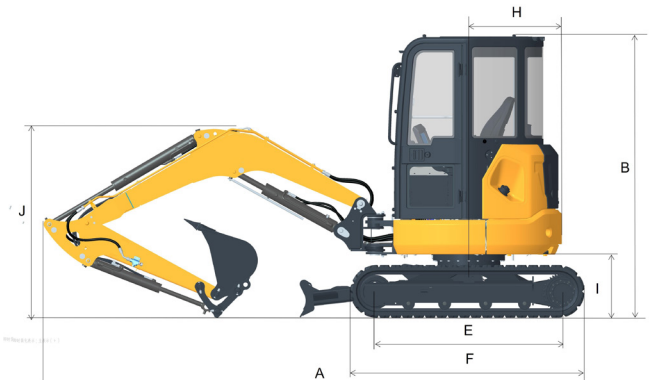
Description	
2-speed drive motors allow auto speed shifting. Each motor is equipped with a hydraulic released, spring applied parking brake.	
Max. travel speed	High: 4.2 km/h (2.6 mph) Low: 2.5 km/h (1.5 mph)
Gradeability	30°/58%
Max. drawbar pull	33

MINIESCAVATORE

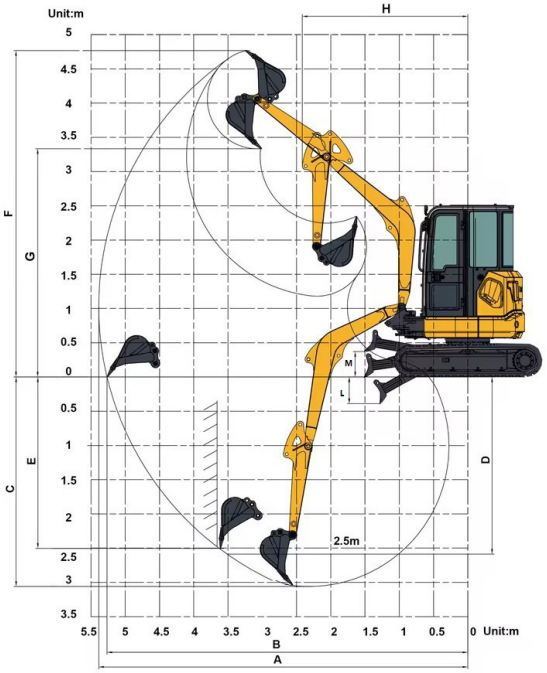
LIUGONG 9035F

NOVITAL

DIMENSIONS		
Boom	2,450 mm (8')	
Arm Options	1,320 mm (4'4")	1,700 mm (5'7")
A Shipping Length	4,810 mm (15'9")	4,860 mm (15'11")
B Shipping Height – Top of Cab	2,500 mm (8'2")	
C Track Gauge	1,400 mm (4'7")	
D Undercarriage Width	1,700 mm (5'7")	
E Length to Center of Rollers	1,675 mm (5'6")	
F Track Length	2,100 mm (6'11")	
G Overall Width of Upper Structure	1,600 mm (5'3")	
H Tail Swing Radius	850 mm (2'9")	
I Counterweight Ground Clearance	580 mm (1'11")	
J Height – Top of Boom	1,685 mm (5'53")	
K Min. Ground Clearance	258 mm (10")	



WORKING RANGE		
Boom	2,450 mm (8')	
Arm options	1,320 mm (4'4")	1,700 mm (5'7")
A. Max. digging reach	5,385 mm (17'8")	5,715 mm (18'9")
B. Max. digging reach on ground	5,270 mm (17'3")	5,603 mm (18'5")
C. Max. digging depth	3,085 mm (10'1")	3,440 mm (11'3")
D. Max. digging depth (2.44 m level)	2,610 mm (8'7")	3,019 mm (9'11")
E. Max. vertical wall digging depth	2,503 mm (8'3")	2,713 mm (8'11")
F. Max. cutting height	4,710 mm (15'5")	4,843 mm (15'11")
G. Max. dumping height	3,310 mm (10'10")	3,463 mm (11'4")
H. Min. front swing radius	2,416 mm (7'11")	2,413 mm (7'11")
L. Dozer-Down	390 mm (1'3")	390 mm (1'3")
M. Dozer-Up	370 mm (1'3")	370 mm (1'3")
Bucket Digging Force (ISO, kN)	33 kN (7,419 lbf)	30 kN (6,744 lbf)
	/	/
Stick Digging Force (ISO, kN)	22 kN (4,946 lbf)	17.8 kN (4,002 lbf)
	/	/
Bucket Capacity	0.11 (0.144 yd³)	0.07 (0.092 yd³)
Bucket Tip Radius	725 mm (2'5")	725 mm (2'5")

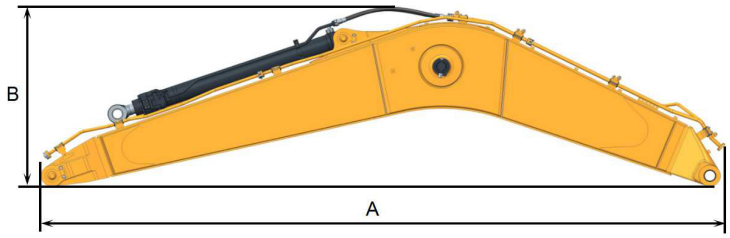


Novital Srl – Via delle Industrie 64/66 – 20864 Agrate Brianza (MB)
PI/CF: 04497970964 – Cap. Soc. 110.000,00 iv – E.: noleggio@novitalrent.com – T: +39 (0)39-881121

MINIESCAVATORE

LIUGONG 9035F

NOVITAL



BOOM DIMENSIONS	
Boom	2,450 mm (8')
Length	2,548 mm (8'4")
Height	806 mm (2'8")
Width	273 mm (11")
Weight	142 kg (313 lbs)

Includes arm cylinder, piping and pin, excludes boom cylinder pin.

ARM DIMENSIONS		
Arm	1,320 mm (4'4")	1,700 mm (5'7")
Length	1,706 mm (5'7")	2,100 mm (6'11")
Height	392 mm (1'3")	392 (1'3")
Width	145 mm (5.7")	145mm (5.7")
Weight	78 kg (172 lbs)	97 kg (214 lbs)

Includes bucket cylinder, linkage and pin.

MACHINE WEIGHTS AND GROUND PRESSURE

Shoe width	Operating weight	Ground pressure	Overall width
	2,450 mm (8') boom, 1,320 mm (4'4") arm, 0.11 m³ (0.144 yd³) bucket, 560 kg (1234.6 lbs) counterweight		
300 mm (12") Cab	3,800 kg (8,377.6 lbs)	35 kPa (177.7 psi)	1,675 mm (5'6")
300 mm (12") Canopy	3,540 kg (7,804.4 lbs)	34 kPa (167.7 psi)	1,675 mm (5'6")

BUCKET SELECTION GUIDE

Bucket Type	Capacity	Cutting Width	Weight	Teeth pcs	2,450 mm (8'10") Boom 1,320 mm (4'9"), 1,700 mm (5'7") Arm
General purpose	0.07 m³ (0.09 yd³)	458 mm (1'6")	82 kg (181 lbs)	EA	A
General Purpose	0.11 m³ (0.14 yd³)	610 mm (2')	101 kg (223 lbs)	3/4	A
Digging	0.045 m³ (0.06 yd³)	305 mm (1')	62 kg (137 lbs)	4	A/B
Digging	0.065 m³ (0.09 yd³)	458 mm (1'6")	76 kg (168 lbs)	2	A/B
Grading	0.14 m³ (0.18 yd³)	830 mm (2'9")	205 kg (452 lbs)	3	A
Ditch Cleaning	0.18 m³ (0.24 yd³)	1,000 mm (3'3")	160 kg (353 lbs)	/	A

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 lbs/yd³) : Coal, Caliche, Shale
B. 1,400-1,600 kg/m³ (2,360-2,697 lbs/yd³) : Wet earth and clay, limestone, sandstone
C. 1,700-1,800 kg/m³ (2,865-3,034 lbs/yd³) : Granite, wet sand, well blasted rock
D. 1,900 kg/m³ (3,203 lbs/yd³) : 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.

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.

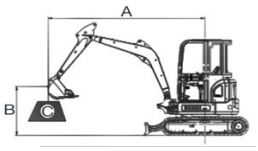
LIFTING CAPACITY (METRIC)

9035F$_{ZTS}$ with 300 mm Shoes, 2,450 mm Boom, 1,320 mm Arm

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

Conditions

Boom length: 2,450 mm
Arm length: 1,320 mm
Bucket: 0.11 m³
Shoes: 300 mm
Unit: kg



Blade Down

A (Unit: m)

B (m)		2.0		3.0		4.0		MAX REACH		
										A (m)
3.0	kg					*650	490	*660	450	4.2
2.0	kg			*840	780	*700	480	*670	370	4.6
1.0	kg			*1,050	720	*820	460	*690	340	4.7
GROUND LEVEL	kg	*1,730	1,270	*1,390	680	*900	440	*720	340	4.6
-1.0	kg	*2,400	1,290	*1,330	670	*830	440	*750	410	4.2

Blade Up

A (Unit: m)

B (m)		2.0		3.0		4.0		MAX REACH		
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
3.0	kg					630	490	580	450	4.2
2.0	kg			*840	780	620	480	490	370	4.6
1.0	kg			950	720	600	460	460	340	4.7
GROUND LEVEL	kg	*1,730	1,270	910	680	580	440	460	340	4.6
-1.0	kg	1,780	1,290	900	670	580	440	550	410	4.2

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.

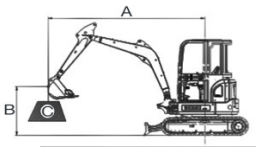
LIFTING CAPACITY (METRIC)

9035F$_{ZTS}$ with 300 mm Shoes, 2,450 mm Boom, 1,700 mm Arm

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

Conditions

Boom length: 2,450 mm
Arm length: 1,700 mm
Bucket: 0.07 m³
Shoes: 300 mm
Unit: kg



Blade Down

A (Unit: m)

B (m)		2.0		3.0		4.0		MAX REACH		
										A (m)
3.0	kg					*494	493	*519	472	4.4
2.0	kg					*577	548	*555	394	4.8
1.0	kg	2,200	1,530	*1,018	820	*722	520	*603	367	4.9
GROUND LEVEL	kg	*2843	1,409	*1,315	762	*844	493	*657	369	4.8
-1.0	kg	*2,658	1,404	*1,375	742	*857	482	*724	418	4.4

Blade Up

A (Unit: m)

B (m)		2.0		3.0		4.0		MAX REACH		
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (m)
3.0	kg					*494	493	*519	472	4.4
2.0	kg					*577	548	521	394	4.8
1.0	kg	2,101	1,530	1,018	820	684	520	490	367	4.9
GROUND LEVEL	kg	1,965	1,409	1,018	762	657	493	495	369	4.8
-1.0	kg	1,960	1,404	997	742	645	482	560	418	4.4

MINIESCAVATORE

LIUGONG 9035F

NOVITAL

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.

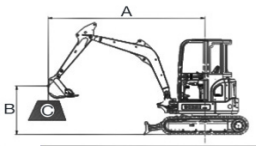
LIFTING CAPACITY (METRIC)

9035F$_{ZTS}$ with 12" Shoes, 8' Boom, 4'4" Arm

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

Conditions

Boom length: 8' boom
Arm length: 4'4"
Bucket: 0.14 yd³
Shoes: 12"
Unit: lbs



Blade Down

A (Unit: ft)

B (ft)		6'7"		9'10"		13'1"		MAX REACH		
										A (ft)
9'10"	lbs					*1,433	1,080	*1,455	992	13'9"
6'7"	lbs			*1,851	1,719	*1,543	1,058	*1,477	815	15'2"
3'3"	lbs			*2,315	1,587	*1,807	1,014	*1,521	749	15'7"
GROUND LEVEL	lbs	*3,813	2,800	*3,064	1,499	*1,984	970	*1,587	749	15'1"
-4'9"	lbs	*5,291	2,843	*2,932	1,477	*1,829	970	*1,653	903	13'8"

Blade Up

A (Unit: ft)

B (ft)		6.5		10		13.1		MAX REACH		
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (ft)
9'10"	lbs					1,388	1,080	1,278	992	13'9"
6'7"	lbs			*1,851	1,719	1,366	1,058	1,080	815	15'2"
3'3"	lbs			2,094	1,587	1,322	1,014	1,014	749	15'7"
GROUND LEVEL	lbs	*3,813	2,799	2,006	1,499	1,278	970	1,014	749	15'1"
-4'9"	lbs	*3,924	2,843	1,984	1,477	1,278	970	1,212	903	13'8"

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.

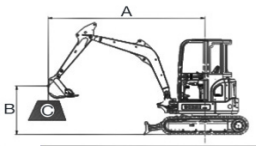
LIFTING CAPACITY (METRIC)

9035F$_{ZTS}$ with 12" Shoes, 8' Boom, 5'7" Arm

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

Conditions

Boom length: 8' boom
Arm length: 5'7"
Bucket: 0.09 yd³
Shoes: 12"
Unit: lbs



Blade Down

A (Unit: ft)

B (ft)		6'7"		9'10"		13'1"		MAX REACH		
										A (ft)
9'10"	lbs					*1,089	1,087	*1144	1,041	14'5"
6'7"	lbs					*1,272	1,208	*1224	869	15'9"
3'3"	lbs	*4,851	3,374	*2,245	1,808	*1,592	1,147	*1,330	809	16'1"
GROUND LEVEL	lbs	*6,269	3,107	*2,900	1,680	*1,861	1,087	*1,449	814	15'8"
-4'9"	lbs	*5,861	3,096	*2,992	1,636	*1,890	1,063	*1,596	922	14'3"

Blade Up

A (Unit: ft)

B (ft)		6.5		10		13.1		MAX REACH		
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	A (ft)
9'10"	lbs					*1,089	1,087	*1,144	1,041	14'5"
6'7"	lbs					*1,272	1,208	1,149	869	15'9"
3'3"	lbs	4,633	3,374	2,245	1,808	1,508	1,147	1,080	809	16'1"
GROUND LEVEL	lbs	4,333	3,107	2,245	1,680	1,449	1,087	1,091	814	15'8"
-4'9"	lbs	4,322	3,096	2,198	1,636	1,422	1,063	1,235	922	14'3"