

CX50B

**COMPACT EXCAVATOR
TIER IV COMPLIANT**

ENGINE

Model	Yanmar 4TNV88-BXYB
Cylinders	4
Bore/Stroke	3.46 in x 3.54 in (88 x 90 mm)
Displacement	133.5 in ³ (2189 cc)
Fuel injection	Direct
Fuel injection pump	Mechanical
Fuel	Diesel
Fuel filter	Full flow, paper element
Cooling	Liquid
Horsepower per SAE J1349	
Net	39.8 hp (29.3 kW) @ 2400 rpm
Maximum torque @ 1440 rpm	
Net	102.7 lb-ft (139.3 N-m)

BOOM/ARM

Boom	
Swing	70° left/60° right
Length	9 ft 6 in (2.89 m)
Boom w/arm cylinder & plumbing	485 lb (220 kg)
Arm	
Length	5 ft 1 in (1.56 m)
Arm w/bucket cylinder linkage & plumbing	320 lb (145.2 kg)

UNDERCARRIAGE

Number of rollers	
Top, each track	1
Bottom, each track	5
Gradeability	58% (30°)
Drawbar Pull	12,170 lb (5527 kg)

HYDRAULICS

Pumps	Tandem variable displacement axial piston pump	
Capacity –		
Maximum	2 x 15.0 gpm	(2 x 57.1 L/min)
Auxiliary Flow	15.0 gpm	(57.1 L/min)
System relief pressure –		
Standard	3,336 psi (23.0 MPa)	
Pilot control hydraulic system –		
Pump (1)	Gear pump	
Maximum capacity	4.0 gpm	(15.2 L/min)
Relief pressure	514 psi (3.5 MPa)	
Control valves –		
11 spool		
Pilot control for left/right track travel, boom, arm, bucket & swing		
Manual control for breaker & backfill blade		
Swing/Dozer blade		
Motor (1)	Fixed displacement axial piston design	
Speed	0-8.8 rpm	
Brake	Spring applied, hydraulically released with dual cushion relief	
Tail swing radius	3 ft 2 in (980 mm)	
Tail swing overhang	0 ft 0 in (0 mm)	
Travel –		
Motor (2)	Two-speed axial piston design	
Final drive	Planetary gear reduction	
Travel speeds –		
Low	1.7 mph (2.8 km/h)	
High	2.9 mph (4.6 km/h)	

HYDRAULIC CYLINDERS

Boom cylinder (1)	
Bore diameter	3.94 in (100 mm)
Rod diameter	2.17 in (55 mm)
Stroke	27.5 in (699 mm)
Arm cylinder (1) –	
Bore diameter	3.54 in (90 mm)
Rod diameter	1.97 in (50 mm)
Stroke	28.2 in (716 mm)
Bucket cylinder (1) –	
Bore diameter	2.95 in (75 mm)
Rod diameter	1.57 in (40 mm)
Stroke	21.50 in (546 mm)

ELECTRICAL

Voltage	12 volts, negative ground
Alternator	40 amp
Batteries (1) 12V	Low-maintenance

SERVICE CAPACITIES

Hydraulic tank	
Refill capacity	11 gal (42 L)
Total system	17 gal (63 L)
Engine	
w/filter change	2 gal (7.4 L)
Fuel	14 gal (53 L)
Radiator	1.6 gal (6.0 L)

OPERATING WEIGHT

With 165 lb (75 kg) operator, 247 lb (112 kg) bucket, full fuel and standard equipment	10,261 lb (4660 kg)
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LIFT CAPACITIES

Canopy model – 5 ft 1 in (1.56 m) Arm Lift capacities calculated using 15.7 in (400 mm) shoes, 247 lb (112 kg) bucket, blade down.

Load (Lift Point) Height	5 ft (1.5 m)		7.5 ft (2.3 m)		10 ft (3.0 m)		12.5 ft (3.8 m)		15.0 ft (4.6 m)	
	END	SIDE	END	SIDE	END	SIDE	END	SIDE	END	SIDE
+12.5 ft (3.8 m)							1,930 lb 870 kg	1,690 lb 760 kg		
+10 ft (3.0 m)							2,050 lb 930 kg	1,660 lb 750 kg	2,120 lb 960 kg	1,180 lb 530 kg
+7.5 ft (2.3 m)					2,720 lb 1230 kg	2,340 lb 1060 kg	2,410 lb 1090 kg	1,600 lb 720 kg	2,250 lb 1020 kg	1,150 lb 520 kg
+5 ft (1.52 m)			6,180 lb 2800 kg	3,400 lb 1540 kg	3,750 lb 1700 kg	2,160 lb 980 kg	2,900 lb 1310 kg	1,510 lb 680 kg	2,490 lb 1130 kg	1,100 lb 500 kg
+2.5 ft (0.8 m)			4,940 lb 2240 kg	3,110 lb 1410 kg	4,640 lb 2100 kg	2,010 lb 910 kg	3,360 lb 1520 kg	1,430 lb 640 kg	2,730 lb 1240 kg	1,060 lb 480 kg
Ground Level	3,330 lb 1510 kg	3,330 lb 1510 kg	5,840 lb 2650 kg	3,050 lb 1380 kg	5,100 lb 2310 kg	1,930 lb 870 kg	3,670 lb 1660 kg	1,370 lb 620 kg	2,880 lb 1300 kg	1,030 lb 460 kg
-2.5 ft (-0.8 m)	5,220 lb 2370 kg	5,220 lb 2370 kg	7,800 lb 3530 kg	3,050 lb 1380 kg	5,130 lb 2320 kg	1,900 lb 860 kg	3,720 lb 1690 kg	1,350 lb 610 kg	2,840 lb 1290 kg	1,020 lb 460 kg
-5 ft (-1.52 m)	7,310 lb 3310 kg	6,980 lb 3160 kg	6,950 lb 3150 kg	3,100 lb 1410 kg	4,720 lb 2140 kg	1,920 lb 870 kg	3,420 lb 1550 kg	1,360 lb 610 kg		
-7.5 ft (-2.3 m)	9,340 lb 4230 kg	7,190 lb 3260 kg	5,370 lb 2430 kg	3,210 lb 1450 kg	3,670 lb 1660 kg	1,990 lb 900 kg				

*Rated loads are hydraulic limits rather than tipping load limits.

Cab model – 5 ft 1 in (1.56 m) Arm Lift capacities calculated using 15.7 in (400 mm) shoes, 247 lb (112 kg) bucket, blade down.

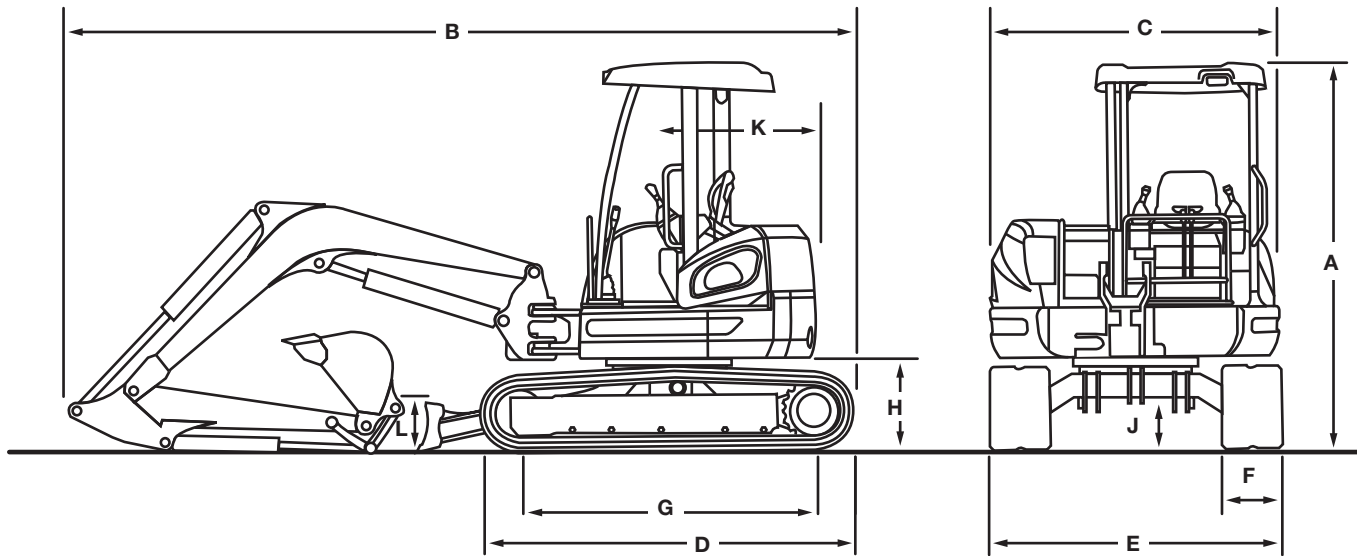
Load (Lift Point) Height	5 ft (1.5 m)		7.5 ft (2.3 m)		10 ft (3.0 m)		12.5 ft (3.8 m)		15.0 ft (4.6 m)	
	END	SIDE	END	SIDE	END	SIDE	END	SIDE	END	SIDE
+10 ft (3.0 m)									2,120 lb 960 kg	1,220 lb 550 kg
+7.5 ft (2.3 m)							2,410 lb 1090 kg	1,650 lb 750 kg	2,260 lb 1020 kg	1,190 lb 540 kg
+5 ft (1.52 m)			6,180 lb 2800 kg	3,510 lb 1590 kg	3,750 lb 1700 kg	2,240 lb 1010 kg	2,900 lb 1310 kg	1,560 lb 710 kg	2,490 lb 1130 kg	1,150 lb 520 kg
+2.5 ft (0.8 m)			4,940 lb 2240 kg	3,220 lb 1460 kg	4,650 lb 2100 kg	2,080 lb 940 kg	3,360 lb 1520 kg	1,480 lb 670 kg	2,730 lb 1240 kg	1,100 lb 500 kg
Ground Level	3,330 lb 1510 kg	3,330 lb 1510 kg	5,840 lb 2650 kg	3,160 lb 1430 kg	5,100 lb 2310 kg	2,000 lb 900 kg	3,670 lb 1660 kg	1,420 lb 640 kg	2,880 lb 1310 kg	1,070 lb 480 kg
-2.5 ft (-0.8 m)	5,220 lb 2370 kg	5,220 lb 2370 kg	7,800 lb 3530 kg	3,170 lb 1430 kg	5,130 lb 2320 kg	1,970 lb 890 kg	3,720 lb 1690 kg	1,400 lb 630 kg	2,850 lb 1290 kg	1,060 lb 480 kg
-5 ft (-1.52 m)	7,310 lb 3310 kg	7,220 lb 3270 kg	6,950 lb 3150 kg	3,220 lb 1460 kg	4,720 lb 2140 kg	1,990 lb 900 kg	3,420 lb 1550 kg	1,410 lb 640 kg		
-7.5 ft (-2.3 m)	9,340 lb 4230 kg	7,420 lb 3360 kg	5,370 lb 2430 kg	3,320 lb 1500 kg	3,670 lb 1660 kg	2,070 lb 930 kg				

*Rated loads are hydraulic limits rather than tipping load limits.

Canopy model – 6 ft 2 in (1.87 m) Arm Lift capacities calculated using 15.7 in (400 mm) shoes, 247 lb (112 kg) bucket, blade down.

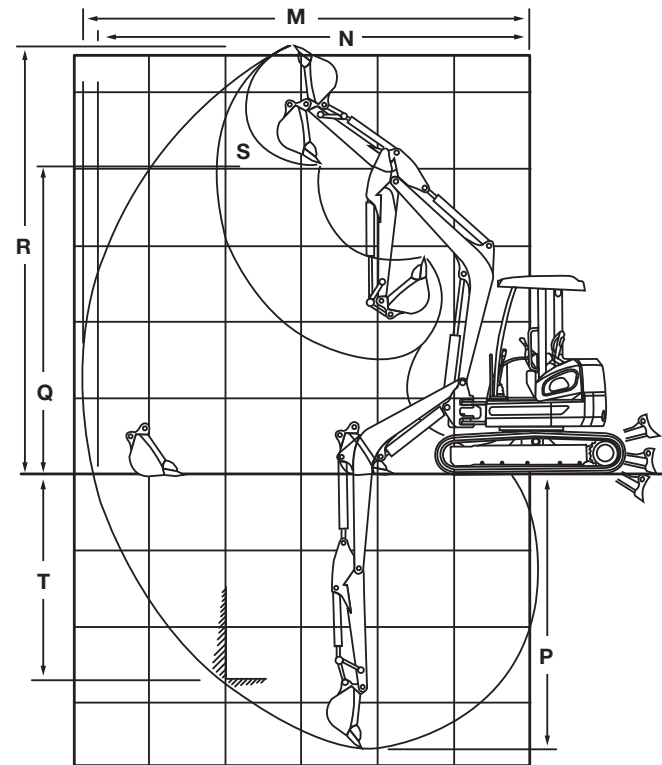
Load (Lift Point) Height	5 ft (1.5 m)		7.5 ft (2.3 m)		10 ft (3.0 m)		12.5 ft (3.8 m)		15.0 ft (4.6 m)		17.5 ft (5.3 m)	
	END	SIDE	END	SIDE	END	SIDE	END	SIDE	END	SIDE	END	SIDE
+15 ft (4.6 m)							1,730 lb* 780 kg*	1,690 lb 760 kg				
+12.5 ft (3.8 m)							1,560 lb* 710 kg*	1,560 lb* 710 kg*	1,840 lb* 830 kg*	1,190 lb 530 kg		
+10 ft (3.0 m)							1,710 lb* 770 kg*	1,670 lb 760 kg	1,830 lb* 830 kg*	1,180 lb 530 kg		
+7.5 ft (2.3 m)							2,080 lb* 940 kg*	1,600 lb 720 kg	2,010 lb* 910 kg*	1,140 lb 510 kg	1,670 lb* 750 kg*	830 lb 370 kg
+5 ft (1.52 m)			4,950 lb* 2240 kg*	3,530 lb 1600 kg	3,240 lb* 1470 kg*	2,190 lb 990 kg	2,600 lb* 1170 kg*	1,500 lb 680 kg	2,280 lb* 1030 kg*	1,090 lb 490 kg	2,110 lb* 950 kg*	810 lb 360 kg
+2.5 ft (0.8 m)			8,270 lb* 2840 kg*	3,140 lb 1420 kg	4,260 lb* 1930 kg*	2,010 lb 910 kg	3,120 lb* 1410 kg*	1,410 lb 640 kg	2,560 lb* 1160 kg*	1,030 lb 470 kg	2,230 lb* 1010 kg*	780 lb 350 kg
Ground Level	2,960 lb* 1340 kg*	2,960 lb* 1340 kg*	5,810 lb* 2830 kg*	2,990 lb 1350 kg	4,900 lb* 2220 kg*	1,890 lb 860 kg	3,510 lb* 1590 kg*	1,340 lb 600 kg	2,770 lb* 1250 kg*	990 lb 450 kg		
-2.5 ft (-0.8 m)	4,500 lb* 2040 kg*	4,500 lb* 2040 kg*	7,140 lb* 3240 kg*	2,970 lb 1340 kg	5,090 lb* 2310 kg*	1,840 lb 830 kg	3,670 lb* 1660 kg*	1,300 lb 590 kg	2,840 lb* 1290 kg*	970 lb 440 kg		
-5 ft (-1.52 m)	6,240 lb* 2830 kg*	6,240 lb* 2830 kg*	7,370 lb* 3340 kg*	3,000 lb 1360 kg	4,880 lb* 2210 kg*	1,850 lb 830 kg	3,540 lb* 1600 kg*	1,300 lb 590 kg				
-7.5 ft (-2.3 m)	8,350 lb* 3780 kg*	6,940 lb 3150 kg	6,130 lb* 2780 kg*	3,080 lb 1390 kg	4,150 lb* 1880 kg*	1,900 lb 860 kg	2,880 lb* 1300 kg*	1,340 lb 610 kg				
-10 ft (-3.0 m)	6,180 lb* 2800 kg*	6,180 lb* 2800 kg*	3,620 lb* 1640 kg*	3,260 lb 1480 kg								

*Rated loads are hydraulic limits rather than tipping load limits.



DIMENSIONS

A. Overall height	8 ft 6 in (2.60 m)
B. Overall length	17 ft 1 in (5.23 m)
C. Width of upperstructure	6 ft 4 in (1.94 m)
D. Track overall length	8 ft 1 in (2.48 m)
E. Track overall width w/15.7 in (400 mm) shoes	6 ft 5 in (1.96 m)
F. Track shoe width	15.7 in (400 mm)
G. Center to center (idler to sprocket)	6 ft 6 in (1.97 m)
H. Upperstructure ground clearance	2 ft 1 in (635 mm)
J. Minimum ground clearance	1 ft 1 in (345 mm)
K. Tail swing radius	3 ft 2 in (980 mm)
L. Backfill blade height	1 ft 2 in (345 mm)
Working weight	10,261 lb (4660 kg)
Ground pressure	3.9 psi (27 kPa)
Boom swing	Left 70°/ Right 60°
Tail swing overhang	0 ft 0 in (0 m)



PERFORMANCE SPECS

	6 ft 2 in (1.87 m) arm	5 ft 1 in (1.56 m) arm
M. Maximum dig radius	20 ft 4 in (6.19 m)	19 ft 3 in (5.89 m)
N. Dig radius at groundline	19 ft 10 in (6.05 m)	18 ft 10 in (5.75 m)
P. Maximum dig depth	12 ft 10 in (3.90 m)	11 ft 9 in (3.59 m)
Q. Dump height	14 ft 1 in (4.29 m)	13 ft 5 in (4.09 m)
R. Overall reach height	19 ft 3 in (5.88 m)	18 ft 7 in (5.67 m)
S. Bucket rotation	178°	178°
T. Vertical straight wall dig depth	10 ft 3 in (3.12 m)	9 ft 3 in (2.81 m)
Arm digging force	5,238 lb (2376 kg)	5,912 lb (2682 kg)
Bucket digging force		
2 position bucket	11,128 lb (5048 kg)	11,128 lb (5048 kg)

STANDARD EQUIPMENT

OPERATOR'S COMPARTMENT

ROPS/FOPS three post canopy

Operator's controls:

Pilot operated hand controls and foot pedals

Display includes:

Engine oil pressure, water temperature lamp, air filter lamp, water separator detection lamp, low fuel warning lamp, battery charge lamp, glow plug indicator lamp, water temperature gauge, fuel gauge and hourmeter

Adjustable seat with seat belt

Arm rests

ENGINE

Yanmar 4TNV88-BXYB diesel

4 Cycle

Water cooled

Direct injection

One touch decelerator

Engine access under rear hood

Dry type air cleaner

Glow plug starting aid

ELECTRICAL

12-volt electrical starting system

Heavy-duty battery

Horn

HYDRAULICS

Auxiliary hydraulics (single/bi-directional) and plumbing to arm

Large hydraulic oil cooler

Control pattern selector valve

TRACK DRIVE

Rubber tracks

Automatic 2 speed travel

Fully hydrostatic drive system

Sealed and lubricated track rollers

Track tension adjustment (grease type)

Disc type parking brake (auto release and apply)

UPPER STRUCTURE

Zero tail swing

Swing lock

Swing brake

Swing shock valve

OTHER

Swing boom (70° left/60° right)

Hydraulic backfill blade

OPTIONAL EQUIPMENT

OPERATOR'S COMPARTMENT

Cab with heater

OTHER

Steel tracks

6 ft 2 in (1.87 m) arm

Mechanical coupler

Rigid thumb

Rigid thumb-coupler

BUCKETS

Width	SAE Heaped Capacity	Weight
12 in (305 mm)	3.0 ft ³ (0.085 m ³)	314 lb (142 kg)
18 in (457 mm)	4.5 ft ³ (0.127 m ³)	362 lb (164 kg)
24 in (610 mm)	6.3 ft ³ (0.178 m ³)	435 lb (197 kg)
36 in (914 mm)	9.8 ft ³ (0.277 m ³)	525 lb (238 kg)

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: Case Construction Equipment Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Equipment Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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