

# R35Z-9A

Motor YANMAR 3TNV88F

**Net Power** 23.7 hp  
(17.7 kW) at 2,200 rpm  
**Bucket Breakout Force**  
(ISO) 3,130 kgf / 6,900 lbf

**Operating Weight** (cab / canopy)  
3,840 kg (8,470 lb) / 3,550 kg (7,800 lb)  
**Arm Digging Force**  
(ISO) 1,990 kgf / 4,390 lbf

## ENGINE

MODEL	YANMAR 3TNV88F		
Type	Water-cooled, 4-cycle diesel 3 cylinders in line, direct injection, low emission		
Rated flywheel horsepower	SAE	J1995 (gross)	24.4 HP (18.2 kW) at 2,200 rpm
		J1349 (net)	23.7 HP (17.7 kW) at 2,200 rpm
Max. torque	9.1 kgf·m (79 lbf·ft) at 1,320 rpm		
Bore X stroke	88 mm (3.46") x 90 mm (3.54")		
Piston displacement	1,642 cc (100 in <sup>3</sup> )		
Battery	1 x 12V x 70 Ah		
Starting motor	12 V - 2.3 kW		
Alternator	12 V - 55 Amp		

## HYDRAULIC SYSTEM

MAIN PUMP	
Type	Variable displacement piston pumps + gear pump
Max. flow	2 x 37.4 l/min (2 x 9.9 gpm) + 23.1 l/min (6.1 gpm) at 2,200 rpm
Sub-pump for pilot circuit (Gear Pump)	23.1 / 9.9 l/min (6.1 / 2.6 gpm)

## CROSS-SENSING AND FUEL-SAVING PUMP SYSTEM

HYDRAULIC MOTORS	
Travel	Two-speed axial piston motor with counter balance valve and parking brake
Swing	Axial piston motor with automatic brake

## RELIEF VALVE SETTING

Implement circuits	230 kgf/cm <sup>2</sup> (3,560 psi)
Travel circuit	230 kgf/cm <sup>2</sup> (3,270 psi)
Swing circuit	200 kgf/cm <sup>2</sup> (2,845 psi)
Pilot circuit	40 kgf/cm <sup>2</sup> (570 psi)
Service valve	Installed

## HYDRAULIC CYLINDERS

No. of cylinders bore X stroke	Boom: 85 x 540 mm (3.3" x 21.3")
	Arm: 80 x 585 mm (3.1" x 23.0")
	Bucket: 70 X 510 mm (2.8" x 20.1")
	Boom swing: 80 X 400 mm (3.1" x 15.7")
	Dozer blade: 95 X 152 mm (3.7" x 6.0")

## TRAVEL SYSTEM

Drive method	Full hydrostatic type
Drive motor	Axial piston motor, in-shoe design
Reduction system	2-stage planetary
Max. drawbar pull	3,100 kgf (6,835 lbf)
Max. travel speed (high) / (low)	4.2 km/hr (2.6 mph) / 2.5 km/hr (1.6 mph)
Gradeability	30° (58%)
Parking brake	Multi-wet disc

**CONTROLS** Pilot-pressure-operated joysticks and pedals with detachable lever provide almost effortless and fatigueless operation.

Pilot control	Two joysticks with one safety lever (LH): Arm swing, Boom swing (RH): Boom and bucket with horn (ISO)
Traveling and steering	Two levers with pedals
Engine throttle	Electric, dial type

## SWING SYSTEM

Swing motor	Axial piston motor
Swing reduction	2-stage planetary
Swing bearing lubrication	Grease-bathed
Swing brake	Multi wet disc
Swing speed	9.5 rpm

## COOLANT AND LUBRICANT CAPACITY

(Refilling)	liter	gal
Fuel tank	40.0	10.5
Engine coolant	5.5	1.5
Engine oil	6.7	1.8
Hydraulic tank	37.0	9.8
Hydraulic system	60	15.9

## WEIGHT (APPROXIMATE)

Operating weight, including 2,500 mm (8' 12") boom, 1,300 mm (4' 3") arm, SAE heaped 0.11 m<sup>3</sup> (0.14 yd<sup>3</sup>) excavator bucket, 300 mm (11.8") rubber track, lubricant, coolant, full fuel tank, hydraulic tank, 560 kg (1,230 lb) counterweight and the standard equipment.

Operating weight (canopy)	3,550 kg (7,800 lb)
Ground pressure (canopy)	0.33 kg/cm <sup>2</sup> (4.69 psi)

## UNDERCARRIAGE











X-leg type center frame is integrally welded with reinforced box-section track frames. The undercarriage includes lubricate rollers, track adjusters with shock absorbing springs and sprockets, and track chain with triple grouser shoes.

Center frame	X - leg type
Track frame	Pentagonal box type
No. of track shoes on each side	44
No. of upper rollers on each side	1
No. of lower rollers on each side	4

 Rating over front  Rating over side or 360 degree

## R35Z-9A Lifting Capacity ISO Condition 2

Boom: 2.50 m (8' 2") / Arm: 1.30 m (4' 3") / Bucket: 0.11 m<sup>3</sup> (0.14 yd<sup>3</sup>) SAE heaped / Dozer down / Rubber track: 300 mm (12") / Cabin Type / Counterweight: 560 kg (1,230 lb)

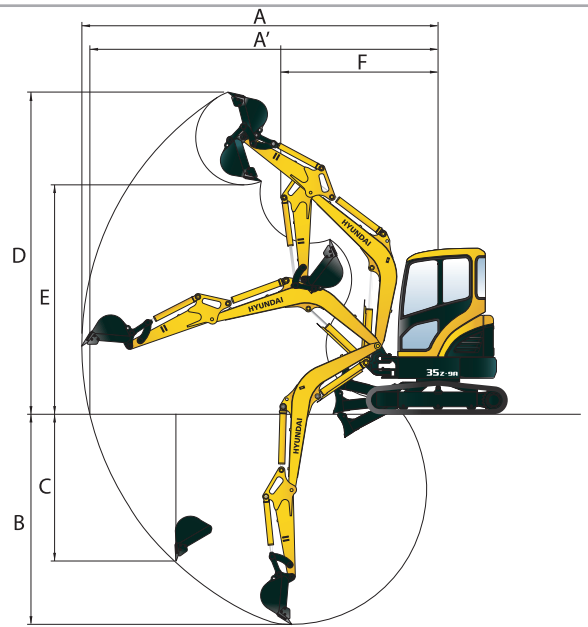
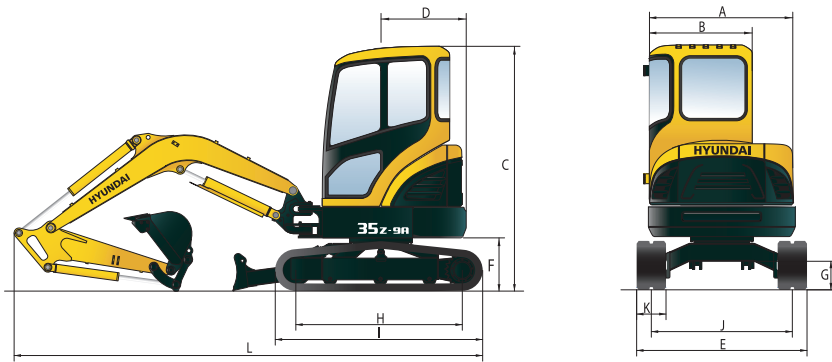
Lift-point height m (ft)		Lift-point radius								At max. reach			
		1.0 m (3.3 ft)		2.0 m (6.6 ft)		3.0 m (9.8 ft)		4.0 m (13.1 ft)		Capacity			
												Reach m(ft)	
4.0 m	kg									*670	*670	3.12	
13.1 ft	lb									*1,470	*1,470	(10.2)	
3.0 m	kg								*620	590	*630	580	4.04
9.8 ft	lb								*1,370	1,300	*1,380	1,280	(13.3)
2.0 m	kg					*790	*790	*650	580	*630	*630	480	4.48
6.6 ft	lb					*1,730	*1,730	*1,430	1,280	*1,390	*1,390	1,070	(14.7)
1.0 m	kg					*1,060	850	*740	560	*650	*650	450	4.61
3.3 ft	lb					*2,340	1,870	*1,620	1,230	*1,430	*1,430	1,000	(15.1)
0.0 m	kg			*1,260	*1,260	*1,190	810	*790	540	*670	*670	470	4.46
0.0 ft	lb			*2,770	*2,770	*2,620	1,800	*1,740	1,200	*1,480	*1,480	1,030	(14.6)
-1.0 m	kg	*1,930	*1,930	*1,890	1,550	*1,110	810			*690	550	4.00	
-3.3 ft	lb	*4,250	*4,250	*4,160	3,430	*2,440	1,790			*1,520	1,210	(13.1)	
-2.0 m	kg			*1,210	*1,210	*670	*670			*650	*650	3.03	
-6.6 ft	lb			*2,670	*2,670	*1,490	*1,490			*1,440	*1,440	(9.9)	

Notes: 1. Lifting capacities are based on ISO 10567.  
2. Lifting capacities of the 9A Series does not exceed 75% of tipping load with the machine on firm, level ground or 87% of full hydraulic capacity.

3. The lift-point is a hook (standard equipment) located on the back of the bucket.  
4. (\*) indicates load limited by hydraulic capacity.

# Dimensions & Working Range

## R35Z-9A DIMENSIONS



### R35Z-9A DIMENSIONS

		mm (ft-in)			
<b>A</b>	Overall width of upper structure	1,500 (4' 11")	<b>G</b> Ground clearance	290 (0' 11")	
<b>B</b>	Overall width of cab	1,050 (3' 5")	<b>H</b> Tumbler distance	1,700 (5' 7")	
<b>C</b>	Overall height of cab	2,500 (8' 2")	<b>I</b> Track length	2,130 (7' 10")	
<b>D</b>	Tail swing radius	870 (2' 10")	<b>J</b> Track gauge	1,440 (4' 9")	
<b>E</b>	Overall width	1,740 (5' 9")	<b>K</b> Track shoe width	300 (1' 0")	
<b>F</b>	Clearance under counterweight	540 (1' 9")	<b>L</b> Overall length	1,300-mm Arm	4,790 (15' 9")
				1,600-mm Arm	4,815 (15' 10")

### R35Z-9A WORKING RANGE

		mm (ft-in)	
Boom length		2,500 (8' 2")	
Arm length		1,300 (4' 3")	1,600 (5' 3")
<b>A</b>	Max. digging reach	5,315 (17' 5")	5,605 (18' 5")
<b>A'</b>	Max. digging reach on ground	5,200 (17' 1")	5,495 (18' 0")
<b>B</b>	Max. digging depth	3,135 (10' 3")	3,440 (11' 3")
<b>C</b>	Max. vertical wall digging depth	2,190 (7' 2")	2,565 (8' 5")
<b>D</b>	Max. digging height	4,810 (15' 9")	5,010 (16' 5")
<b>E</b>	Max. dumping height	3,425 (11' 3")	3,615 (11' 10")
<b>F</b>	Min. swing radius	2,350 (7' 9")	2,330 (7' 8")

## STANDARD EQUIPMENT

- Cabin** TOPS ISO 12117  
(ROPS ISO 12117-2)  
FOG ISO 10262 Level I  
(FOPS ISO 3449 Level I)
- All-weather steel cab with all-around visibility  
Safety glass windows  
Sliding fold-in front window  
Sliding side window  
Lockable door  
Accessory box  
Air conditioner and heater  
Centralized monitoring  
Gauges
- Fuel level gauge
  - Engine coolant temperature gauge

- Warning indicators**
- Quick clamp
  - Engine oil pressure
  - Engine coolant temperature
  - Preheat
  - Low battery
  - Air cleaner clogging
  - Fuel empty
- Door and locks, universal key**  
Mechanical suspension seat with seat belt  
Radio / USB Player  
Console box tilting system (LH)  
One front working lights  
Electric horn  
Battery (1 x 12 V x 70 AH)  
Battery master switch  
Automatic swing brake

- Removable reservoir tank  
Water separator, fuel line  
Mono boom (2.5 m / 8' 2")  
Arm (1.3 m / 4' 3")  
Rubber track shoes (300 mm / 12")  
Double acting piping (Clamshell, etc)  
Auto idle function  
Universal start key  
Emergency stop switch  
Auto travel shift down travel motor  
Cabin lamp  
Travel alarm  
Quick coupler with piping  
Heater and defroster  
Pattern-change lever  
Hyundai bucket (0.11 m<sup>3</sup> / 0.14 yd<sup>3</sup>)

## OPTIONAL EQUIPMENT

- Canopy** TOPS ISO 12117  
(ROPS ISO 12117-2)  
FOG ISO 10262 Level I  
(FOPS ISO 3449 Level I)
- Accumulator**  
Steel track shoes (300 mm / 12")  
Long Arm (1.6 m)  
Additional counterweight (150 kg / 330 lb)

- RCV with proportional control switch  
Rotating attachment piping  
Safety lock valve



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