

# LOADER BACKHOE

# CASE

CONSTRUCTION

SINCE 1842.

## 575SV

### ENGINE

Brand	FPT
Model	S8000
Type	4-stroke, turbocharged diesel, Tier 3 certified
Cylinders	4
Bore/Stroke	104 x 115 mm (4.09" x 4.52")
Displacement	3.9 l (238 pol. <sup>3</sup> )
Fuel Injection	Direct
Fuel	Diesel
Fuel Filter	with water separator
Cooling	Liquid
Engine Speeds (rpm)	
Rated Speed, full load	2.200
Idle	950 ± 50
Maximum speed, no load	2380 ± 50
Power at 2.200 rpm	
Gross	96 hp (72 kW)
Net	94 hp (70 kW)
Max Torque @ 1300 rpm	
Gross	420 N.m (310 lbf.pé)
Torque reserve	30% ± 5%
Note: Gross power and torque per ISO 14396	
Net power per	SAE J1349

### TRANSMISSION

Transmission – 4WD		
Power Shuttle with 4 forward speeds and 4 reverse speeds		
Gear Ratio	Forward	Reverse
1 <sup>st</sup>	5.603	4.643
2 <sup>nd</sup>	3.481	2.884
3 <sup>rd</sup>	1.585	1.313
4 <sup>th</sup>	0.793	0.657

### Travel speeds – km/h (mph)

	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Advance	6.2 (3.9)	10.0 (6.2)	20.7 (12.9)	39.2 (24.4)
Reverse	7.4 (4.6)	12.0 (7.5)	24.8 (15.4)	Not recommended
Front tire				12.5x18
Rear tire				16.9x28
Torque converter				
Conversion ratio				3.01
4WD Front / Rear Axle				
Differential Ratio Planetary				2.286 / 2.466
Hub Ratio Total Reduction				6.0 / 6.9
Ratio				13.71 / 17.07

"Declutch" transmission release switches, one on the front panel and the other on the loader control lever

Service brakes	
Hydraulic drive with pedal, 2 discs per side.	
Disc area	9228 pol. <sup>2</sup> (1476 cm <sup>2</sup> )

Parking brakes	
Manual, with lever	

Note: Service brake performance according to ISO 3450 standard

### ENGINE COOLING

Radiator	
Core area	3048 cm <sup>2</sup> (472 pol. <sup>2</sup> )
Tube rows	4
Fan	
Type	5 paddle aspirant
Diameter	480 mm (19")
Ratio	1.38:1
Gradeability limited by the operation of the pump	
Side to side	35°
Forward-Backward	35°
Oil filter	Replaceable, flow (full), spin-on type

### ELECTRIC SYSTEM

Voltage	12 V
Alternator	120 A
Battery	130Ah, 720 CCA

### HYDRAULIC SYSTEM

Pump	
Double gear pump	
Backhoe main relief pressure	
205 +/- 5 bar @ 145 l/min @ 2200 rpm	
2973 +/- 73 psi @ 38.30 gal/min @ 2200 rpm	

Filtration	
10 µm element, return line, full flow, spin on type.	

Loader Control Valve	
Sectional valve with two or three spools.	
The two spool valve has a single lever control for lift and tilt on a standard machine. The three-spool valve features a two-lever control, of which the first lever is for lift.	

Backhoe Mechanical Control Valve	
Sectional valve with six or seven spools, closed center with parallel circuits.	

## SERVICE CAPABILITIES

Fuel tank	129 l (34 gal)
Hydraulic System	
Total	107 l (28 gal)
Transmission – Total System	
4WD Standard	20 L (5,3 gal)
Axles - Total System	
Front Axle 4WD	8,9 l (2,35 gal)
Rear Axle	17,1 l (4,50 gal)
Engine oil with filter	9,1 l (2,27 gal)
Cooling System	20 l (5,3 gal)

## LOADER

Single lever self-leveling and return-to-dig control

Mechanical loader valve lockout

Loader control of up to 3 functions, lifting, unloading and transmission uncoupling

Available buckets:

General Purpose Bucket with Bolt-On Teeth

Width	Capacity	Weight
		(empty bucket)
89" (2277 mm)	1,0 m <sup>3</sup> (1,31 yd <sup>3</sup> )	450 kg (992 lb)
89" (2277 mm)	1,1 m <sup>3</sup> (1,44 yd <sup>3</sup> )	470 kg (1036 lb)
89" (2277 mm)	1,2 m <sup>3</sup> (1,57 yd <sup>3</sup> )	485 kg (1069 lb)

General Purpose Bucket without Teeth

Width	Capacity	Weight
		(empty bucket)
89" (2277 mm)	1,2 m <sup>3</sup> (1,57 yd <sup>3</sup> )	460 kg (1014 lb)

4 in 1 Bucket with Bolt-On Teeth

Width	Capacity	Weight
		(empty bucket)
90" (2300 mm)	1 m <sup>3</sup> (1,31 yd <sup>3</sup> )	560 kg (1235 lb)

6 in 1 Bucket with Bolt-On Teeth

Width	90" (2.300 mm)
Capacity	1 m <sup>3</sup> (1,31 yd <sup>3</sup> )
Weight (empty bucket)	715 kg (1.576 lb)

## BACKHOE

Mechanical control system with 2 levers

204° bucket rotation with mechanical coupler

Foot control for extendahoe

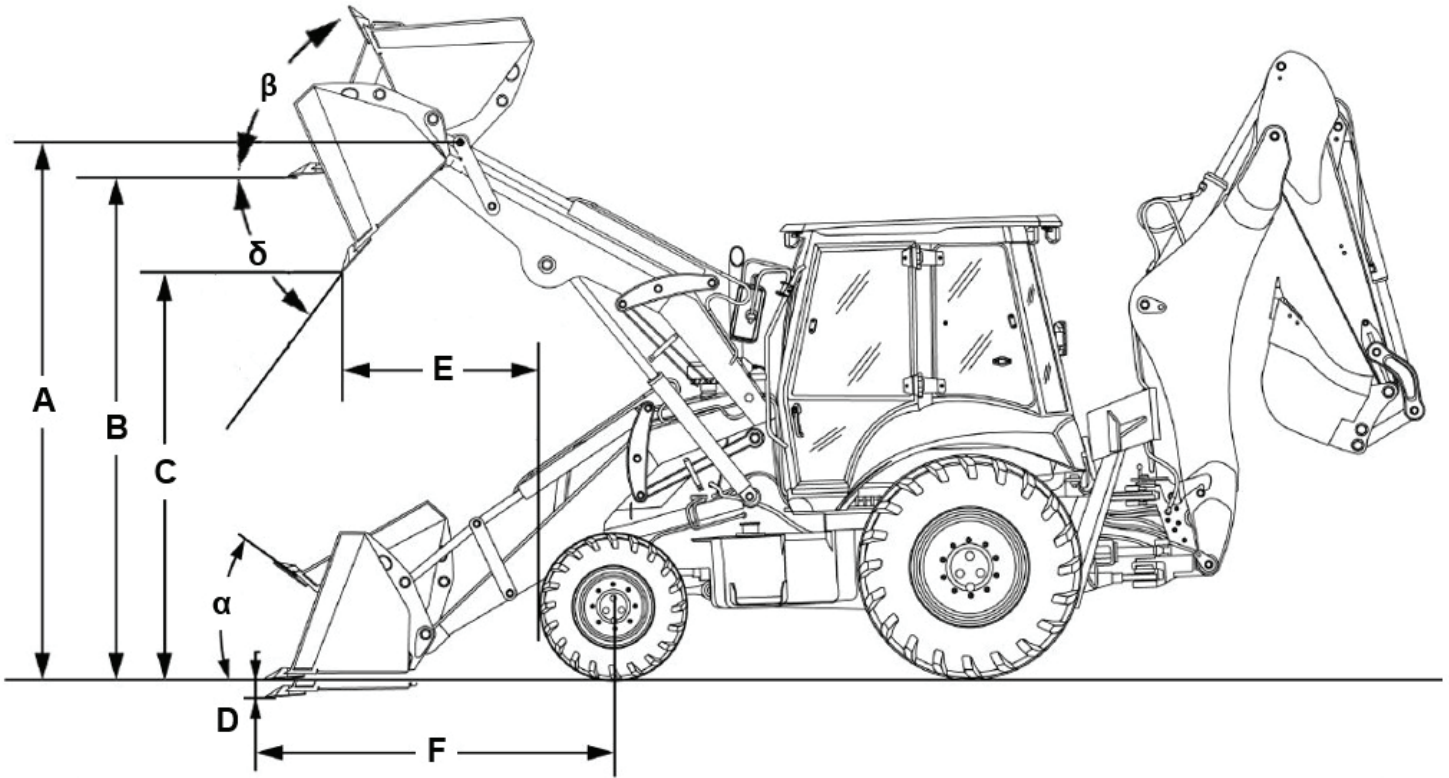
Stabilizer control

Available buckets

Width	Capacity	Weight
		(empty bucket)
305 mm (12")	0,08 m <sup>3</sup> (0,10 yd <sup>3</sup> )	119 kg (262 lb)
457 mm (18")	0,12 m <sup>3</sup> (0,16 yd <sup>3</sup> )	138 kg (304 lb)
610 mm (24")	0,18 m <sup>3</sup> (0,24 yd <sup>3</sup> )	166 kg (366 lb)
762 mm (30")	0,26 m <sup>3</sup> (0,34 yd <sup>3</sup> )	217 kg (478 lb)
914 mm (36")	0,30 m <sup>3</sup> (0,39 yd <sup>3</sup> )	248 kg (547 lb)

## OPERATING WEIGHTS

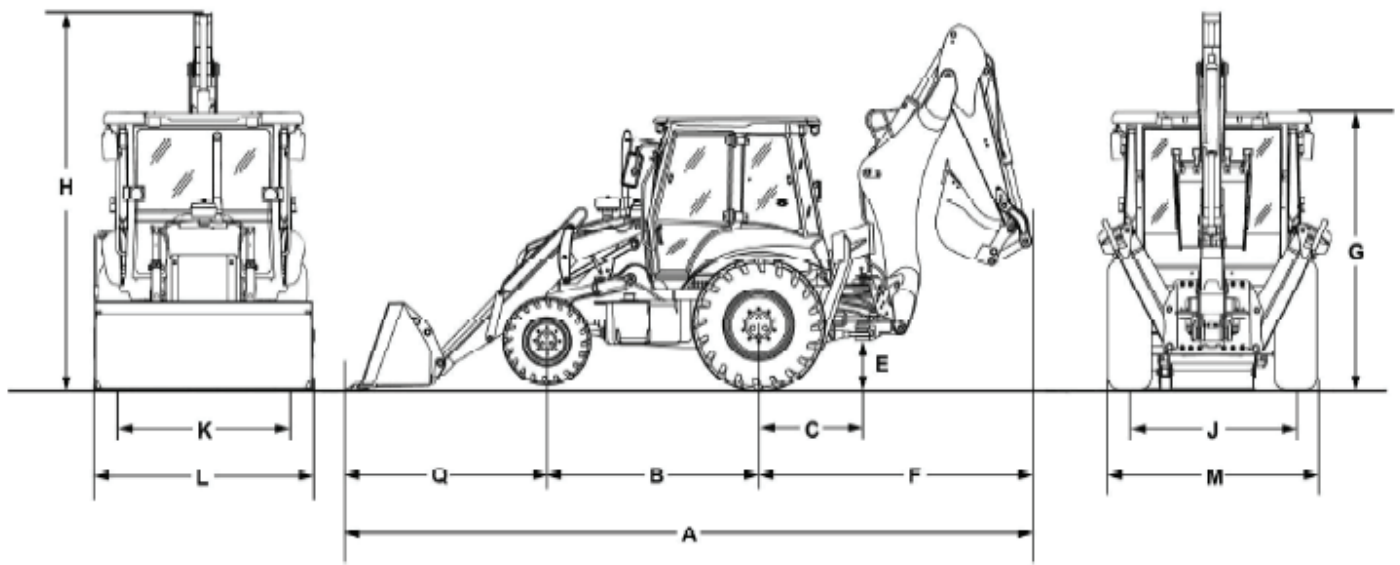
4WD equipped unit with 1m<sup>3</sup> loader bucket, 0.30m<sup>3</sup> backhoe bucket, 14' E-hoe arm, 12.5x18 front tire, rear tier 16.9x28, 211 kg light counterweight and ROPS/FOPS cab with AC.  
7.662 kg (16.892 lb)



### LOADER DIMENSIONS\*

	Standard bucket	4 IN 1 Bucket
<b>A</b> Hinge pin height	3420 mm (11' 2,6")	3420 mm (11' 2,6")
<b>B</b> Load over height	3175 mm (10' 5")	3175 mm (10' 5")
<b>̑</b> Dump angle	45°	45°
<b>C</b> Maximum dump height	2640 mm (8' 7,9")	2652 mm (8' 8,4")
<b>E</b> Dump reach at full height	855 mm (2' 9,6")	835 mm (2' 8,8")
Loader bucket rollback angles at ground line	43,2°	43,2°
<b>D</b> Dig depth below ground level	150 mm (5,9")	163,5 mm (6,43")
<b>F</b> Reach from front axle's center – bucket on ground	2010 mm (6' 7,1")	2035 mm (6' 8,1")
Lifting capacity to maximum height	3934 kg (8673 lb)	3572 kg (7875 lb)
Breakout force –		
Bucket	7.497 kgf (16.528 lbf)	7.735 kgf (17.052 lbf)
Arm	5.815 kgf (12.820 lbf)	5.860 kgf (12.920 lbf)

NOTE: Loader dimensions with 4x4 traction, rear tires 16.9 x 28 - 12 ply and front tires 12.5 x 18 - 12 ply.



## DIMENSIONS

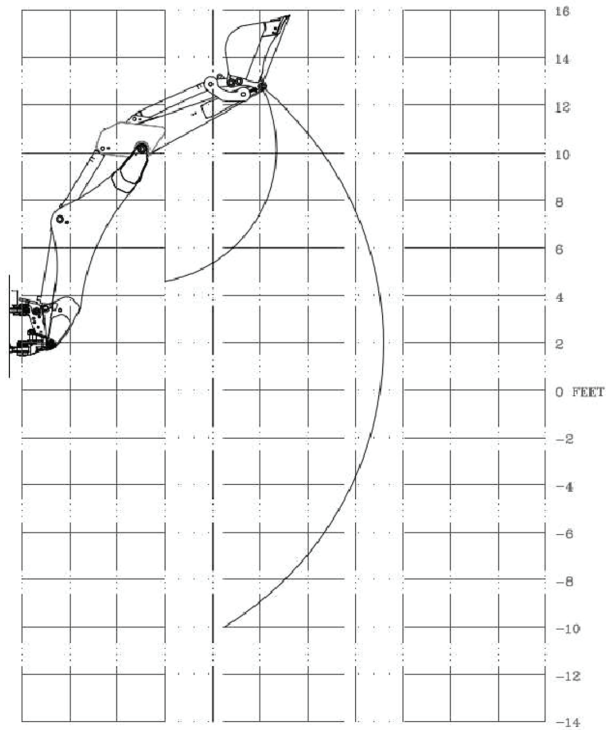
	<b>4WD with tires of 12,5 x 18 - 12 ply tires</b>
<b>A.</b> Overall transport length	7190.0 mm (283.1 in)
<b>B.</b> Distance between axis	2175.00 mm (85.63 in)
<b>C.</b> Rotation center to rear axle center	1127.0 mm (44.4 in)
<b>E.</b> Pivoting ground clearance	500.0 mm (19.7 in)
<b>F.</b> Distance from rear wheel to bucket	3000.0 mm (118.1 in)
<b>G.</b> Height to the top of the cabin	2825.0 mm (111.2 in)
<b>H.</b> Transport height	3790.0 mm (149.2 in)
<b>J.</b> Track width-Rear	1697.2 mm (66.8 in)
<b>K.</b> Track Width-Front	1897.0 mm (74.7 in)
<b>L.</b> Loader bucket width	2277.0 mm (89.6 in)
<b>M.</b> Transport width	2300.0 mm (90.6 in)
Overall transport length	7190 mm (19' 7,07")
<b>Q.</b> Ground reach (1.0 m <sup>3</sup> bucket)	2011.0 mm (79.2 in)

## CYLINDERS

	Cylinder diameter	Rod diameter	Stroke	Length closed
Loader				
Lift (2)	95,2 mm (3,75")	50,8 mm (2,00")	725 mm (28,54")	1000 mm (39,37")
Dump (2)	82,6 mm (3,25")	44,5 mm (1,75")	777 mm (30,59")	1020 mm (40,16")
Backhoe				
Spear	130 mm (5,12")	65 mm (2,56")	907 mm (35,71")	1207 mm (47,52")
14' arm	125 mm (4,92")	65 mm (2,56")	695 mm (27,4")	1009 mm (39,72")
Bucket	90 mm (3,54")	65 mm (2,56")	762 mm (30")	1073 mm (42,24")
14' Extendahoe®	75 mm (2,95")	45 mm (1,77")	1050 mm (41,34")	1400 mm (55,12")
15' Extendahoe®	75 mm (2,95")	45 mm (1,77")	1200 mm (47,24")	1550 mm (61,02")
Turn (2)	110 mm (4,33")	60 mm (2,36")	238 mm (9,4")	136 mm (5,36")
Stabilizer (2)	70 mm (2,76")	50 mm (1,97")	709 mm (27,91")	1081 mm (42,56")

## CYLINDER CYCLE TIMES

LOCAL	FUNCTION	CYCLE TIME (SEC)
<b>Loader cylinders</b>	Lift the loader arm	2,1
	Lower the loader arm	1,5
	Close bucket at maximum height	1,7
	Open bucket at maximum height	1,2
	Open bucket (4X1 or 6X1)	1,6
	Close bucket (4X1 or 6X1)	1,0
<b>Excavator Cylinders</b>	Open bucket	1,8
	Close bucket	2,2
	Collect arm	3,0
	Extend arm	3,7
	Collect spear	3,1
	Extend spear	2,5
	Collect stabilizers	2,8
	Extend stabilizers	2,3
Turn	3,1	



## BACKHOE LIFT CAPACITIES

Arm 14'	Standard backhoe	Extendahoe®	
	Lift capacity of the backhoe – kg (lb)	Recolhido Lift capacity of the backhoe – kg (lb)	Estendido Lift capacity of the backhoe – kg (lb)
+5,2 m (17')	—	—	—
+4,9 m (16')	1.624 (3.573)	—	838 (1.844)
+4,3 m (14')	1.829 (4.024)	1.598 (3.516)	1.142 (2.513)
+3,7 m (12')	1.881 (4.138)	1.635 (3.597)	1.174 (2.583)
+3 m (10')	1.850 (4.070)	1.609 (3.540)	1.179 (2.594)
+2,4 m (8')	1.797 (3.954)	1.556 (3.423)	1.169 (2.572)
+1,8 m (6')	1.734 (3.815)	1.504 (3.309)	1.153 (2.537)
+1,2 m (4')	1.677 (3.689)	1.451 (3.192)	1.132 (2.491)
+0,6 m (2')	1.624 (3.573)	1.399 (3.078)	1.116 (2.455)
Ground level	1.577 (3.469)	1.357 (2.986)	1.095 (2.409)
-0,6 m (2')	1.530 (3.366)	1.315 (2.893)	1.079 (2.374)
-1,2 m (4')	1.499 (3.298)	1.279 (2.814)	1.069 (2.352)
-1,8 m (6')	1.472 (3.238)	1.252 (2.755)	1.058 (2.328)
-2,4 m (8')	1.467 (3.227)	1.242 (2.733)	1.058 (2.328)
-3 m (10')	1.520 (3.344)	1.273 (2.801)	1.074 (2.363)
-3,7 m (12')	1.624 (3.573)	1.404 (3.089)	1.121 (2.466)
-4,3 m (14')	—	—	1.300 (2.860)
-4,6 m (15')	—	—	1.603 (3.527)
Digging arm lift			
+4,3 m (14')	—	—	1.642 (3.613)
+3,7 m (12')	2.520 (5.544)	2.249 (4.948)	1.789 (3.936)
+3 m (10')	2.423 (5.331)	2.645 (5.819)	1.762 (3.877)
+2,4 m (8')	2.472 (5.439)	2.645 (5.819)	1.783 (3.923)
+1,8 m (6')	2.710 (5.962)	2.645 (5.819)	1.864 (4.101)
+1,2 m (4')	—	2.645 (5.819)	2.043 (4.495)
+0,6 m (2')	—	—	2.450 (5.390)
Ground level	—	—	—

## BACKHOE LIFT CAPACITIES

Arm 15'	Standard backhoe	Extendahoe®	
		Retracted	Extended
Lift arm elevation	Lift capacity of the backhoe – kg (lb)	Lift capacity of the backhoe – kg (lb)	Lift capacity of the backhoe – kg (lb)
+5,2 m (17')	—	—	840 (1.848)
+4,9 m (16')	1.530 (3.366)	—	1.095 (2.409)
+4,3 m (14')	1.810 (3.982)	1.695 (3.729)	1.185 (2.607)
+3,7 m (12')	1.865 (4.103)	1.740 (3.828)	1.215 (2.673)
+3 m (10')	1.845 (4.059)	1.720 (3.784)	1.230 (2.706)
+2,4 m (8')	1.700 (3.740)	1.570 (3.454)	1.215 (2.673)
+1,8 m (6')	1.605 (3.531)	1.475 (3.245)	1.165 (2.563)
+1,2 m (4')	1.555 (3.421)	1.425 (3.135)	1.135 (2.497)
+0,6 m (2')	1.535 (3.377)	1.400 (3.080)	1.120 (2.469)
Ground level	1.545 (3.399)	1.410 (3.102)	1.117 (2.464)
-0,6 m (2')	1.585 (3.487)	1.445 (3.179)	1.140 (2.513)
-1,2 m (4')	1.575 (3.465)	1.415 (3.113)	1.150 (2.530)
-1,8 m (6')	1.560 (3.432)	1.395 (3.069)	1.145 (2.519)
-2,4 m (8')	1.560 (3.432)	1.385 (3.047)	1.150 (2.530)
-3 m (10')	1.605 (3.531)	1.415 (3.113)	1.165 (2.563)
-3,7 m (12')	1.855 (4.081)	1.630 (3.586)	1.210 (2.662)
-4,3 m (14')	—	—	1.325 (2.915)
-4,6 m (15')	—	—	1.910 (4.211)
Digging arm lift			
+4,3 m (14')	—	—	1.540 (3.388)
+3,7 m (12')	2.085 (4.587)	1.960 (4.312)	1.505 (3.311)
+3 m (10')	2.010 (4.422)	1.890 (4.158)	1.485 (3.267)
+2,4 m (8')	2.035 (4.477)	1.910 (4.202)	1.500 (3.300)
+1,8 m (6')	2.175 (4.785)	2.040 (4.488)	1.550 (3.410)
+1,2 m (4')	2.575 (5.665)	2.420 (5.324)	1.675 (3.685)
+0,6 m (2')	—	—	1.905 (4.191)
Ground level	—	—	2.250 (4.950)

## BACKHOE OPERATING DATA

Arm 14'	Standard Backhoe	Extendahoe®	
		Retracted	Extended
Dig depth –			
Maximum	4,39m (14' 5,1")	4,54m (14' 11")	5,58m (18' 3,8")
Flat bottom of 610 mm (2')	4,34m (14' 3")	4,54m (14' 11")	5,57m (18' 3,6")
Flat bottom of 2.440 mm (8')	3,98m (13' 1")	4,19m (13' 9")	5,29m (17' 4,5")
Digging maximum reach	5,65m (18' 6,7")	5,79 m (19')	6,74m (22' 1,3")
Loading height	3,54m (11' 7,4")	3,64m (11' 11,5")	4,28 m (14' 0,5")
Loading Reach – Digging Arm	1,96m (6' 5,3")	2,05m (6' 8,7")	2,89m (9' 5,6")
Overall turning angle	180°	180°	180°
Rear bucket rotation angle –			
without coupling	160°	160°	160°
Stabilizer Width	2,30 m (7' 6,5")	2,30 m (7' 6,5")	2,30 m (7' 6,5")
Digging force - Maximum force hole			
Bucket cylinder	5.606 kgf (12.598 lbf)	5.616 kgf (12.620 lbf)	5.616 kgf (12.620 lbf)
Digging arm cylinder	4.286 kgf (9.631 lbf)	4.030 kgf (9.060 lbf)	2.931 kgf (6.587 lbf)

Arm 15'	Standard Backhoe	Extendahoe®	
		Retracted	Extended
Dig depth –			
Maximum	4,70 m (15' 5,0")	4,70 m (15'5,3")	5,90 m (19' 4,2")
Flat bottom of 610 mm (2')	4,63 m (15' 2,4")	4,66 m (15' 3,5")	5,85 m (19' 2,3")
Flat bottom of 2.440 mm (8')	4,29 m (14' 1,0")	4,32 m (14' 2,2")	5,59 m (18' 3,9")
Digging maximum reach	5,93 m (19' 5,3")	5,94 m (19' 5,6")	7,02 m (23' 0,5")
Loading height	3,73 m (12' 2,7")	3,74 m (12' 3")	4,46 m (14' 7,5")
Loading Reach – Digging Arm	2,23 m (7' 4,0")	2,22 m (7' 3,4")	3,17 m (10' 4,8")
Overall turning angle	180°	180°	180°
Rear bucket rotation angle –			
without coupling	160°	160°	160°
Stabilizer Width	2,30 m (7' 6,5")	2,30 m (7' 6,5")	2,30 m (7' 6,5")
Digging force - Maximum force hole			
Bucket cylinder	5.616 kgf (12.620 lbf)	5.616 kgf (12.620 lbf)	5.616 kgf (12.620 lbf)
Digging arm cylinder	3.780 kgf (8.494 lbf)	3.788 kgf (8.512 lbf)	2.696 kgf (6.058 lbf)

## TIRES

Front part
4WD - 12,5/80 x 18 - 12 ply
Rear
4WD - 16,9 x 28 - 12 ply

## OPERATOR ENVIRONMENT

ROPS/FOPS certified cabin
Note: ROPS, in compliance with ISO 3471 and FOPS in compliance with ISO 3164
Rear fender extensions
Left and right external mirrors
Internal rearview mirror
Toolbox
Left storage compartment
Ground accessible windshield washer filler door
Two access doors
Folding rear window
Mechanical suspension seat, 180 degree swivel, manual weight/height adjustment, pivoting armrests, tilting seat - seat belt of 2"
Front and rear wipers
Radio

## INSTRUMENTATION

Indicators
Engine water temperature
Fuel level
Tachometer/hourmeter
Backlight gauges with illuminated pointers
Warning lights
Battery charge
Cold start
Transmission oil temperature
Brake oil level
Position lamp
Engine oil pressure
High beam indicator
Parking brake activation
Coolant high temperature
Hydraulic oil filter clogging
Sound alarms
Cold start
Transmission oil temperature
Brake oil level
Engine oil pressure
Parking brake activation
Coolant high temperature
Hydraulic oil filter clogging
Backup alarm
Horn – with double switch front and back
Direction indicators with switch
4 emergency indicators

## TURNING DIAMETER

2WD drive	
Brakes activated	6,0 m (19' 8,2")
Brakes not activated	8,4 m (27' 6,7")
4 wheel drive – right turn	
Brakes activated	7,5 m (24' 7,3")
Brakes not activated	8,8 m (28' 10,5")
4 wheel drive – left turn	
Brakes activated	8,0 m (26' 3,0")
Brakes not activated	9,4 m (30' 10,1")
NOTE: Front tires 12.5/80 x 18 and rear tires 16.9 x 28.	



## STANDARD EQUIPMENT

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### Operator compartment

See page 6

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### Engine

FPT S8000 diesel Tier 3 certified  
Full flow engine oil filter  
Air filter – dry type replaceable with radial seal  
Non-spark protection muffler  
Radiator with expansion tank  
Antifreeze throttlers of -37 °C (-34 °F), both hand and foot activated  
Manual-adjusting belt tensioner  
Mechanical fan with five paddles made of plastic

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### Loader

See page 2

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### Backhoe

See page 2

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### Powertrain

Front axle  
Rear axle  
Without differential lock  
Powershuttle with 4 speeds Forward and 4 speeds Reverse (transmission synchromesh)  
Torque converter – 300 mm (11,8")  
4WD Control in motion  
Electric forward/reverse direction control

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### Hydraulic system

Closed center, load sensing  
Pump of 145 l/min (38.3 gpm) at 2.200 rpm  
Oil filter of 10 µm spin-on type  
Heavy duty radiator hydraulic oil

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### Others

Tilt-forward engine hood  
Front guard and heavy-duty grille tie-downs  
Fixed steering column  
211 kg light counterweight

### Front lights:

2 AMBER turn signal lights, 2 individual 55W work lights and 2 individual driving lights (55W dimmed - 60W bright) with integrated 5W position

### Taillights:

2 turn signals/flashers (21W) with integrated red stop lights and 4 individual 55W work lights  
License plate lamp

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## OPTIONAL EQUIPMENT

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1.2 m<sup>3</sup> Toothless Loading Bucket  
1.1 m<sup>3</sup> and 1.2 m<sup>3</sup> Loading Bucket with Teeth  
4 in 1 and 6 in 1 Loading Buckets  
Rotating beacon  
Front fenders  
Adjustable steering column  
One-way hydraulic auxiliary driven by another additional lever. Flow from 0 to 160 l/min  
Cold Starting auxiliary  
355 kg heavy weight  
Radial front tire 340/80  
Radial rear tyre 440/80  
Front spare tires 12.5/80 x 18 - 2 units  
Rear spare tires 16.9 x 28 - 2 units  
Front spare tires 340/80 - 2 units  
Rear spare tires 440/80- 2 units  
Reversible shoes for stabilizers  
Extendahoe arm  
15-foot digging arm  
Open cabin

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**CCEIO147 - 09/2022 – (Manufacturing in India)**

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