

# Benefits of BIT120

- No workplace exposure to toxic diesel exhaust
- Reduced workplace noise exposure
- Original machine functionality maintained
- Reduced ownership and operating cost



## Design Features

- Engineered structural modifications for integration of electrical conversion.
- Motor integrated with existing transmission/torque converter and axles.
- Traction cooling circuit
- Volvo OEM operational functionality maintained.
- 750VDC (max) 137kWh lithium-ion cobalt battery with direct contact forced flow dielectric fluid cooling system and battery management system (BMS).
- 24VDC lithium-ion phosphate battery with battery protect unit (BPU) and BMS.
- On-board charging via 2 x 25kW 1000V chargers and quick release 1000V restrained receptacle OR 415V CCS2 plug
- Human Machine Interface (HMI) for displaying electrical conversion system status and faults.
- Telemetry unit installed within operator cabin
- Motor regeneration and power saving strategy employed

# BIT120 Specifications

Parameter	Volvo L120F	BIT120F	
Machine Weight – tare mass (no work tool-measured)	19700 kg	17740 kg	
Rated operating load	6400 kg	6400 kg	
Static Tipping Load – straight with			
GP bucket teeth 3.3m <sup>3</sup>	L120F - 13590 kg L120H - 14800kg	12140 kg	
C of G position	L120F X=2191 mm Y=392 mm Z=1042mm	L 120H X=2228 mm Y=421mm Z=1035 mm	X=2135 mm Y=434 mm Z=1029 mm
Front Axle Load (arm low-no tool)	6 200 kg	5902 kg	
Rear Axle Load (arm low-no tool)	13 500 kg	11838 kg	
O/A length – B (no tool)	6580 mm	6470 mm	
O/A Height - F	3370 mm	3370 mm	
Prime mover ground clearance - D	420 mm	420 mm	
Prime mover overhang	2300 mm	2190 mm	
Wheel centres - C	3200 mm	3200 mm	
Track Centres - X	2070 mm	2070 mm	
O/A width - Y	2670 mm	2670 mm	
Inside turning radius - a <sup>3</sup>	3060 mm	3060 mm	
Outside turning radius - a <sup>2</sup>	5730 mm	5730 mm	
Articulation angle – a <sup>4</sup>	±40°	±40°	
Breakout Force	L120F - 150 kN L120H - 189 kN	BIT120F - 150 kN BIT120H - 189 kN	

## Speed – level

1st Gear	7 km/h	7 km/h
2nd Gear	14 km/h	14 km/h
3rd Gear	28 km/h	28 km/h
4th Gear	37 km/h	37 km/h

## Rim pull

1st Gear	181.6 kN	151.5 kN
2nd Gear	95.5 kN	87.3 kN
3rd Gear	45.3 kN	48.5 kN
4th Gear	28.2 kN	35.5 kN

## BladeVolt Charge Rate

