



# NEW ENERGY ASIA PACIFIC

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**“ We’re Changing the Way the World Thinks About Machinery ”**

***New Energy Asia Pacific Co., Ltd***

as part of the effort to make construction more sustainable, we are rolling out all-electric versions of traditional construction vehicles. Electric construction equipment isn't a new concept. Hybrid electric machines have been available for years, and all-electric models of excavators, loaders, dump truck and other heavy machinery are currently available over the world. In coming years, electric heavy machinery will join the ranks of electric cars and public transportation as an eco-friendly alternative, it will be the push for sustainable construction practices intensifie.

# Go Electric

## YOUR ADVANTAGES AT A GLANCE

Transitioning to all-electric construction equipment benefits construction companies and the environment in more ways than one. The top three advantages of electric heavy machinery include:



### 3 MAJOR BENEFIT

#### 1. Lower Carbon Emissions

Because electric construction equipment doesn't rely on gasoline or diesel fuel, it delivers net-zero carbon emissions and promotes sustainable construction practices.

#### 02. Less Noise Pollution

electric construction equipment is much quieter than traditional diesel-fueled machines. This makes machines safer to operate and leaves construction workers feeling less fatigued at the end of the day.

#### 03. Less Project Cost

All-electric equipment not only eliminates fuel costs but also reduces overall operating costs thanks to its lower engine run time.

# All-Electric VS Diesel



## All-Electric Equipment

- Powered by lithium-iron battery packs
- Net-zero carbon emissions



## Diesel Equipment

- Powered by diesel engine
- Emits CO2

In construction site, most of the heavy machinery was powered by diesel fuel. While diesel-powered construction equipment is still overwhelmingly in the Hong Kong, all-electric models are becoming more prominent than you might think — and they tend to blend right in.



When it comes to overall performance capabilities, all-electric equipment is almost identical to its diesel counterpart. The biggest differences between electric and diesel equipment can be found under the hood. Instead of containing a diesel engine and cooling fan, electric equipment contains rechargeable lithium-ion battery packs. Some electric equipment also lacks the traditional hydraulics systems found in their diesel counterparts.

# OUR BRAND



# FOTON ELECTRIC TRUCK



- ❖ Flexible business products and low operating costs
- ❖ Safe driving and intelligent operation
- ❖ Zero emission, long battery life, low energy consumption
- ❖ Battery insulation patent blessing
- ❖ High performance, suitable for complex working conditions



## LOW ENERGY CONSUMPTION

Develop a decoupled braking energy recovery system to achieve motor braking priority, to avoid the synchronous superposition of motor brake and mechanical brake commonly used in the new energy industry. It can effectively improve the braking energy recovery rate by 3-5% and extend the driving range by 5-10 km to reduce the cost of use;

Foton independently develops VCU and adopts PEU five-in-one controller. The PEU system integrates MCU (motor drive), DC-DC (voltage adjustment), OBC (on-board charger), and PTC (on-board heater) and other functions, high integration, advanced algorithms, precise control, and reduce energy consumption under the working conditions of coagulation trucks;



## HIGH POWER

Powerful, equipped with a drive motor with a maximum power of 360kW and a torque of 2400N m. The cruising range of worry-free driving exceeds 160 kilometers, 5 minutes of battery replacement, 2 hours saved, and more efficient transportation.

AMT pure electric system is suitable for the drive power requirements of heavy trucks, and can achieve high power and high torque.



## LONG BATTERY LIFE

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The electric mixer truck has a leading level of technical research on the electronic control system, energy recovery system and bodywork drive system. It adopts a number of new technologies to reduce energy consumption during concrete transportation, reducing the cost of use and driver anxiety.

The top-mounted mixing tank adopts a motor reducer to directly drive the tank, and the transmission system is simple. Compared with the motor-hydraulic system (motor + hydraulic pump + hydraulic motor + reducer) used by competing products, the transmission efficiency is increased from 85% to 96%, and Increase 13% the power consumption of the top-mounted mixing tank.

## LIGHTWEIGHT

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Using a series of new materials, new technologies and new processes, the weight of the electric mixer is 1 ton lower than that of competing products.

The lightweight design of the upper body is optimized from the tank assembly, cleaning system and sub-frame assembly, and the weight of the upper body is greatly reduced.

## ZERO EMISSION

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No pollution in emissions: no diesel and urea are consumed, and no harmful substances such as nitrogen oxides, carbon monoxide and particles are produced;

Low noise: When the vehicle is in use, the noise is extremely low, it does not disturb the residents, and the construction environment is greatly improved



# ELECTRIC MIXER



<b>Capacity (m<sup>3</sup>)</b>	10
<b>Model</b>	BJ5319GJBEV1A
<b>Dimension L*W*H (mm)</b>	10510*2550*3860
<b>Axle Distance (mm)</b>	2100+2750+1350
<b>Curb Weight (kg)</b>	15900
<b>Total Mass (kg )</b>	31000
<b>Rear Axle</b>	5.571
<b>Driving mileage (km) (DOD=80%)</b>	160
<b>Battery Rated Voltage (V)</b>	618.24
<b>Battery Rated Capacity (kWh)</b>	281.92
<b>Motor Rated Power (kW)</b>	220/360
<b>Motor torque (Nm)</b>	1500/2100



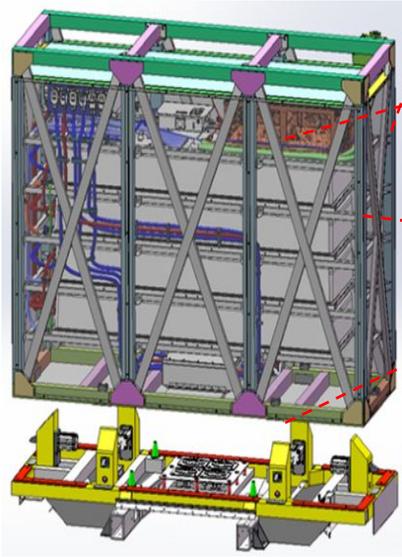
# 30 TON ELECTRIC DUMP TRUCK



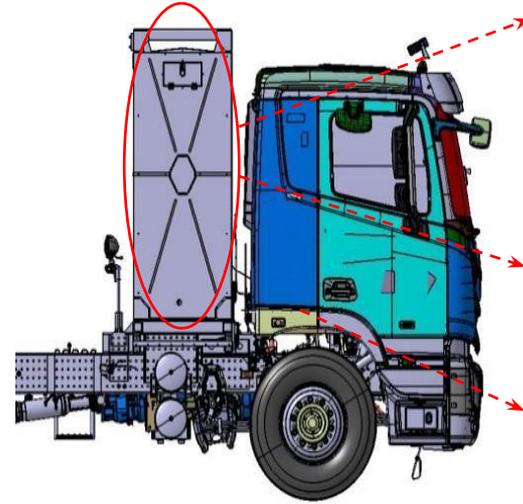
<b>Model</b>	BJ3319EVPA1
<b>Dimension L*W*H(mm)</b>	9260/9460/9660*2490*3550
<b>Alxe Distance (mm)</b>	2100+2750+1400
<b>Curb Weight (kg)</b>	18300
<b>Total Mass (kg )</b>	31000
<b>Rear Axle</b>	5.92
<b>Tyre</b>	12.00R20 18PR
<b>Battery Rated Voltage (V)</b>	618.24
<b>Battery Rated Capacity (kWh)</b>	281.92
<b>Motor Rated Power (kW)</b>	220/360
<b>Motor torque (Nm)</b>	1500/2100



# Power exchange system features



- 1) CATL mature standard battery box, passed 15 national standard test items
- 2) Use a centralized liquid cooling system to ensure battery power performance and prolong battery life (better consistency and reduced attenuation)
- 3) The frame of the battery box uses 4mm high-strength cold-rolled steel, which is better for battery protection;
- 4) The battery system has added 7 additional items of Foton enterprise standard electrical performance (more stringent), and the battery replacement system has added vibration and shock tests



- 1) The centralized arrangement of battery boxes has higher modal frequency and superior structural stability than distributed arrangement
- 2) The battery box is centrally arranged, the high-voltage wiring harness path is short, and the system insulation performance is better
- 3) The battery system is centrally arranged on the rear side of the cab to increase the protection of the cab during the lifting and landing of the container

# eTech ELECTRIC WHEEL LOADER



- ❖ Zero emission, zero pollution, low noise.
- ❖ High battery safety, no risk of spontaneous combustion / deflagration.
- ❖ Low maintenance & operating cost
- ❖ Long battery lifetime
- ❖ Low energy consumption



## HIGH EFFICIENT

The hydraulic system and the traveling system are independently driven, which is simple, reliable, energy-saving and efficient; the traveling motor is driven by the torque/speed/power mode compound, with strong power, and the driving force is superior to the traditional loader of the same tonnage.

The gears are all used in the front two and the rear, and the planetary gearbox has a more reasonable transmission ratio, which can meet the requirements of traction and speed at the same time, and is more suitable for complex and changeable working conditions. V-shaped working conditions, transition distance of 20 meters, no need to stop Low-speed switching, using electro-hydraulic proportional shift control system, smooth control without impact



## LOW ENERGY CONSUMPTION

Independently developed special load positive flow control system with variable speed, good controllability, good low speed performance, supply on demand, can reduce overflow loss during unloading, energy saving and high efficiency, 1 hour comprehensive energy consumption 30-35 kwh.



## **LONG BATTERY LIFE**

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The walking system can recover energy from braking, and the hydraulic system can realize electrical energy recovery, which further improves the battery life of the vehicle.

One charge only takes 1-2 hours (calculated by 120kW charging pile: 5T model supports dual-gun charging, and 240kW charging pile only takes 1 hour)

## **TEMPERATURE CONTROL**

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Through reasonable calculation and selection, reasonable arrangement of cooling pipes and intelligent control of heat dissipation system, the temperature of each high-voltage electrical component of the vehicle and the temperature of hydraulic oil/gear box gear oil can always be kept within the normal working temperature range during long-term work.

## **LESS NOISE**

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After Testing the noise in the cab is as low as 60-75dB, which greatly reduces the harm of noise pollution to the driver. Through real-time insulation resistance monitoring and independent research and development of high-voltage management unit, the high-voltage is reasonably switched on and off, and the driver's property and personal safety are always guaranteed.

## **LESS MAINTENANCE COST**

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Automatic lift hood, special chassis and frame development for parts, reasonable layout of vehicle parts, easy maintenance; hydraulic braking is safe and reliable to reduce energy consumption and low maintenance cost



# NE18-EL WHEEL LOADER

The NE18-EL electric loader is the first-of-its-kind industrial vehicle to be able to deliver power performance with an all-electric drive system. With a 1.8 ton rated operating load and 9-hour operation time, the NE18-EL offers the power to handle the job efficiently while staying quiet and clean for both indoor and outdoor use.



<b>Rated Load</b>	1800kg
<b>Operating Weight</b>	7200kg
<b>Bucket Capacity</b>	1.0m <sup>3</sup>
<b>Electric Drive Motor (Rated Power)</b>	57kW
<b>Electric Working Motor (Rated Power)</b>	37.7kW
<b>Max. Dumping Height (at angle of 45°)</b>	2450mm
<b>Max. Dumping Distance (at angle of 45°)</b>	850mm
<b>Max. Travel Speed</b>	26km/h
<b>Steering Angle</b>	± 32°
<b>Overall Dimension (L x W x H)</b>	6300 x 1920 x 3060mm
<b>Tire</b>	16/70-20PR
<b>Battery Type</b>	Lithium Battery Power
<b>Battery Capacity</b>	140.92Kwh
<b>Battery Voltage</b>	618.24V



# NE50-EL WHEEL LOADER

With a 5-ton load capability the NE50-EL Electric Loader has the robust power to handle large projects without compromising the local environment with harmful operating emissions. This vehicle will lead the world towards a cleaner and healthier tomorrow



<b>Rated Load</b>	5000kg
<b>Operating Weight</b>	18500kg
<b>Bucket Capacity</b>	3.0m <sup>3</sup>
<b>Electric Drive Motor (Rated Power)</b>	120kW
<b>Electric Working Motor (Rated Power)</b>	90kW
<b>Max. Dumping Height (at angle of 45°)</b>	3400mm
<b>Max. Dumping Distance (at angle of 45°)</b>	1300mm
<b>Max. Travel Speed</b>	32km/h
<b>Steering Angle</b>	± 35°
<b>Overall Dimension (L x W x H)</b>	8700 x 3016 x 3380mm
<b>Tire</b>	23.5-25-16PR
<b>Battery Type</b>	Lithium Battery Power
<b>Battery Capacity</b>	282Kwh
<b>Battery Voltage</b>	618.24V

# eTech ELECTRIC EXCAVATOR



- ❖ Zero emission, zero pollution, low noise.
- ❖ High battery safety, no risk of spontaneous combustion / deflagration.
- ❖ Low maintenance & operating cost
- ❖ Long battery lifetime
- ❖ Low energy consumption



## POWER SUPPLY

In response to the working conditions of crawler excavators, the electric crawler excavator with combined power grid/battery power supply was launched.

The power grid independently supplies power and can supply power to the battery, which is suitable for easy access to electricity and small-scale long-term operation scenarios;

The battery is independently powered, which is suitable for short-term operation scenarios such as outside the grid and transfer, and the battery capacity can be configured according to demand;

Power grid/battery composite power supply, suitable for special working conditions.

The AC/DC power supply controller can realize fast switching and adjustment of power supply, and integrate functions such as high-voltage safety management and energy flow management.





## **HIGH EFFICIENCY**

Adopt variable speed and variable displacement dual variable load sensing system. The maximum driving force is increased by more than 20%, the energy consumption of whole machine is reduced by more than 30% and the working efficiency is increased by 20%.

Independently developed electronic control system, provides all-round real time fault diagnosis and protection for the electrical system and hydraulic system, large closed-loop feedback of hydraulic parameters, torque prediction and direct control of torque.

## **LOW ENERGY CONSUMPTION**

Multi-motor coordinated control, reasonable matching of motor load, optimized energy management, efficient operation, time-sharing, automatic idle stop to reduce the energy consumption

## **HYDRAULIC SYSTEM**

Equipped with a load sensing system (LUDV) with anti-flow saturation function, to achieve the matching of load flow and pressure, that is, what you get and what you need.

## **TRAVEL SYSTEM**

Two-speed hydrostatic transmission travel system, full hydraulic brake system, dual-cylinder anti-vibration control, equipped with hydraulic accumulator, safer and more reliable operation and travel.

## **ELECTRONIC THROTTLE SYSTEM**

Electronic throttle system, easy to operate, has two modes of automatic/manual, according to different needs, it can work under heavy load, standard and economic conditions, taking into account high efficiency and different operating habits.



# NE80 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	0.1~0.28
<b>Operating Weight</b>	kg	8,500
<b>Track Shoe</b>	mm	450
<b>Rated Power</b>	kW	46.5
<b>Travel Speed (high/low)</b>	km/h	3.8/2.5
<b>Rotating Speed</b>	r/min	11.5
<b>Max. Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	50
<b>Max. Digging Depth</b>	mm	4,190
<b>Max. Digging Height</b>	mm	5,780
<b>Max. Dumping Height</b>	mm	4,580
<b>Max. Digging Reach</b>	mm	6,710
<b>Min. Turning Radius</b>	mm	1,965
<b>Dimension</b>	mm	5970 x 2190 x 2600



# NE120 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	0.2~0.45
<b>Operating Weight</b>	kg	11,500
<b>Track Shoe</b>	mm	450
<b>Rated Power</b>	kW	74
<b>Travel Speed (high/low)</b>	km/h	35/10
<b>Rotating Speed</b>	r/min	10
<b>Max. Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	63.5
<b>Max. Digging Depth</b>	mm	4,868
<b>Max. Digging Height</b>	mm	6,925
<b>Max. Dumping Height</b>	mm	4,706
<b>Max. Digging Reach</b>	mm	7,236
<b>Min. Turning Radius</b>	mm	1,328
<b>Dimension</b>	mm	7026 x 2400 x 2700



# NE150 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	0.5~0.7
<b>Operating Weight</b>	kg	13,900
<b>Track Shoe</b>	mm	500
<b>Rated Power</b>	kW	92
<b>Travel Speed (high/low)</b>	km/h	5.3 / 3.1
<b>Rotating Speed</b>	r/min	12.4
<b>Max. Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	67.6
<b>Max. Digging Depth</b>	mm	6,039
<b>Max. Digging Height</b>	mm	8,651
<b>Max. Dumping Height</b>	mm	5,552
<b>Max. Digging Reach</b>	mm	8,197
<b>Min. Turning Radius</b>	mm	1,328
<b>Dimension</b>	mm	7750 x 2500 x 2760



# NE250 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	1.2
<b>Operating Weight</b>	kg	25,500
<b>Track Shoe</b>	mm	600
<b>Rated Power</b>	kW	120
<b>Travel Speed (high/low)</b>	km/h	5.3 / 3.5
<b>Rotating Speed</b>	r/min	10.5
<b>Max. Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	135
<b>Max. Digging Depth</b>	mm	6,940
<b>Max. Digging Height</b>	mm	9,680
<b>Max. Dumping Height</b>	mm	6,785
<b>Max. Digging Reach</b>	mm	10,290
<b>Min. Turning Radius</b>	mm	4,450
<b>Dimension</b>	mm	10140 x 3190 x 3100



# NE360 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	1.6
<b>Operating Weight</b>	kg	35,000
<b>Track Shoe</b>	mm	600
<b>Rated Power</b>	kW	180
<b>Travel Speed (high/low)</b>	km/h	5.0 / 3.0
<b>Rotating Speed</b>	r/min	10.5
<b>Max. Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	196
<b>Max. Digging Depth</b>	mm	6,980
<b>Max. Digging Height</b>	mm	9,840
<b>Max. Dumping Height</b>	mm	6,810
<b>Max. Digging Reach</b>	mm	10,700
<b>Min. Turning Radius</b>	mm	4,450
<b>Dimension</b>	mm	11320 x 3340 x 3580



# NE530 EXCAVATOR



<b>Bucket</b>	m <sup>3</sup>	2.7
<b>Weight</b>	kg	53,000
<b>Rated Power</b>	kW	300
<b>Travel Speed (high/low)</b>	km/h	5.6/3.3
<b>Rotating Speed</b>	r/min	10.3
<b>Gradeability</b>	%	70
<b>Max. Arm Digging Force</b>	kN	279
<b>Max. Digging Depth</b>	mm	7,795
<b>Max. Digging Height</b>	mm	10,787
<b>Max. Dumping Height</b>	mm	7,915
<b>Max. Digging Radius</b>	mm	11,800
<b>Min. Turning Radius</b>	mm	5,210
<b>Dimension</b>	mm	12230 x 3900 x 3705

**eTech ELECTRIC SUPPLY**





# BATTERY CHANGING STATION

Average daily service 50 vehicles



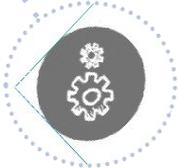
High work intensity



Average daily operation time 16-24h



Average daily mileage less than 300 km



Vehicle more than 50 units



## Specification

<b>Changing Time</b>	3-5 mins
<b>Design Replacement Time</b>	160-180 times / 24h
<b>Battery Changing Mode</b>	Top / Side Changing replacement
<b>Charging Power</b>	2000-3000 KW



# BATTERY CHANGING MODE

## Top Changing replacement



Performance :

- ❖ Battery replacement time: 3-5 minutes
- ❖ Number of spare batteries: 7
- ❖ Applicable models: various heavy truck models
- ❖ The power exchange equipment covers an area of 120m<sup>2</sup>, and the front and rear need to be clear and wide

## Side Changing replacement



Performance :

- ❖ Battery replacement time: 5 minutes
- ❖ Number of spare batteries: 7
- ❖ Applicable models: various heavy truck models
- ❖ The area of the power exchange equipment: 200 m<sup>2</sup>



# INTEGRATED CHARGER STATION



Performance :

- ❖ Charging time: double gun fast charge <40min (20%-80%SOC)
- ❖ Charging mode: double gun fast charge, single gun slow charge
- ❖ Applicable models: mixer trucks and heavy trucks with the same battery interface
- ❖ Charging station area: 1500 m<sup>2</sup> (8 charging piles)



# INTEGRATED CHARGER



## 120kW電動汽車直流一體機(雙槍)

型號	DH-DC1200SG38-Z
功率	120kW
尺寸	800*600*1750 mm
重量	238kg(不含模塊) 安裝方式 落地式

### 技術指標

- ❖ 工作電壓: AC 380V±15; 輸入模式: 三相五線製;
- ❖ 額定輸出電流: 120A(單槍); 最大輸出電流: 250A(單槍);
- ❖ 輸出電流誤差:  $\leq \pm 1$ ; 電流  $< 30A$ , 誤差  $\leq \pm 0.3A$ ;
- ❖ 輸出電壓範圍: DC 50-1000V, 恆功率範圍 300-1000V;
- ❖ 輸出電壓誤差:  $\leq \pm 0.5$ ; 功率因數:  $\geq 0.99$ ;
- ❖ 總諧波電流:  $\leq 5$ (額定條件下, 100負載);
- ❖ 滿載最大效率: 95; 防護等級: IP54; 工作環境溫度:  $-20^{\circ}\text{C} \sim +50^{\circ}\text{C}$ ;
- ❖ 保護特性: 輸入過欠壓保護、輸出過欠壓保護、短路保護、過溫保護、過流保護、電池反接保護、柔性功率分配

### 產品介紹

- ❖ 一體式充電機, 是根據電動車輛設備充電需求, 專業設計生產的鋰動力電池充電機產品。
- ❖ 高效穩定: 該產品採用國際先進的軟開關技術, 具有轉換效率高、輸出電流穩定、可靠性高、壽命長等特點, 具有反接保護、短路保護、低壓保護、過壓保護、過熱保護等功能特點。採用模塊化設計, 具有強大的容錯性。
- ❖ 安全可靠: 帶CAN通信接口, 與電池管理系統BMS和星星充電後台監控系統實時通信, 對鋰動力電池的充電進行優化和可靠的保護。
- ❖ 智能運維: 支持4G/3G/2G等多種通信方式, 支持遠程維護、遠程軟件升級、故障診斷。
- ❖ 靈活配置: 提高了充電機的利用率, 適用於富裕電容有限, 或者適用車型穩定的場景。
- ❖ 模塊兼容性: 具備超強的擴展性和適應性, 兼容60-120kW不同規格類型的充電模塊。



# NEW ENERGY

SAVE WORLD

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