FREQUENTLY ASKED QUESTIONS:

FORKLIFT ELECTRIFICATION

Converting from foklifts powered by internal combustion engines (ICE) to electric is a big decision. Our team, including our extensive network of dealers, stands ready to help answer your questions, navigate the shift and harness the advantages of electric forklifts.

// COSTS

1. Are electric forklifts more expensive than gas or diesel equivalents?

While electric forklifts may have a higher initial acquisition cost, they can offer potential savings and a lower total cost of ownership (TCO) through reduced operating and maintenance expenses. That's because electric drivetrains have fewer components and less complexity than ICE, and lithium-ion batteries require zero battery maintenance or equalization. The useful life of these two types of equipment is also a factor. An average, moderately used ICE truck has an economic life for the first owner of about 10,000—12,000 hours, whereas similarly maintained lithium-ion trucks could surpass this mark. Energy prices, incentives and regulations in your area should also be factored into the cost analysis.

2. Are rebates available for electric forklifts?

Various state and federal programs administer grants, rebates, tax incentives or carbon offset credits. Speak with your local Hyster dealer to learn more about financial incentives in your area.

// EMISSIONS

1. Do electric forklifts produce carbon emissions?

Hyster forklifts powered by lithium-ion and TPPL produce zero tailpipe emissions. Lead acid batteries do not produce emissions while operating but emit fumes that require ventilation during battery charging.

2. Are electric forklifts better for the environment?

Electric forklifts can help companies reduce greenhouse gas emissions (GHG) and their environmental footprint relative to ICE forklifts. For operations where ICE remains the most appropriate power choice, Hyster ICE-powered forklifts are certified by the Environmental Protection Agency (EPA) for emissions compliance.

3. What is the allowable carbon monoxide level of propane forklifts?

OSHA requires that concentration levels of carbon monoxide gas created by PIT operations not exceed those specified in standard number 1910.1000. Clean power options, such as electric forklifts, can help improve air quality because they do not produce harmful emissions. Electric forklifts can also help enhance workplace safety and employee well-being because they are generally quieter and transmit fewer vibrations to the operator than ICE forklifts.

// PRODUCTIVITY

1. Can electric forklifts offer performance comparable to ICE?

Yes. Newer electric forklifts that use lithium-ion batteries provide consistent power until depletion, putting them more in line with ICE performance than the legacy electric option, lead acid batteries. And while lead acid batteries are generally too large and heavy to be adequately scaled up to satisfy the energy draw of a high-capacity forklift, lithium-ion has a smaller, lighter form factor and can tolerate a high energy draw without overheating or dropping in efficiency. Compared to lead acid batteries, lithium-ion offers far greater energy density, power transfer and service life.

2. Can electric lift trucks use heavy attachments?

Yes. Attachments used on ICE forklifts can be used on electric forklifts. The front-end architecture on Hyster forklifts is designed to the same industry standard for either type of truck.

3. Will electric lift trucks lift heavy loads to great heights?

Electric lift trucks can lift the same, or in some cases even slightly more, weight to the same height as the equivalent ICE forklift. This will vary based on your application and configuration, but in general electric forklifts are heavier due to the weight and positioning of the battery, which can allow them to outperform ICE in high-lifting scenarios.

4. Can outdoor forklifts that work in the elements be electrified?

Yes. ICE forklifts have been the tried-and-true option for demanding outdoor operations because they offer remarkable durability and have a proven record of standing up to the most extreme environments. But electric trucks can handle these environments, too. For example, lithium-ion batteries offer strong performance in hot and cold environments, helping forklifts run reliably and consistently over multiple shifts, no matter the season. Our integrated lithium-ion forklifts use a sealed battery housing to keep out moisture.

// INFRASTRUCTURE

1. Do all electric forklifts require battery charging rooms?

No. Lithium-ion batteries are plugged into a charger without removing them from the truck, and their rapid charging speeds can allow for a 1:1 power source to forklift ratio – no need to buy extra batteries to keep trucks moving while depleted batteries charge. This redundancy can happen with lead acid battery packs and even liquified petroleum tanks, eating into valuable space that could be used for other purposes. Lead acid batteries require significant space for battery maintenance, charging and storage.

2. Does electrifying my forklift fleet require upgrades to the electrical infrastructure in my facility?

Not always, but depending on the fleet size, chargers and existing electrical wiring and connections, transitioning a fleet to electric can require upgrades. Unlike ICE, electric forklifts depend on the electric grid in your area and areas with weak grids become more susceptible to interruptions the more intense the charging requirements are. It's important to work with partners who can help you understand the power requirements for your planned fleet, communicate with your utility provider and develop an appropriate charging strategy.

// CHARGING

1. What kind of charging equipment do I need for electric forklifts?

Electric forklifts require the installation of chargers, though the amount does not always exactly match the number of forklifts. Developing an effective charging strategy can help operations determine how many and what type of chargers are necessary. Important factors influencing this approach include the types of batteries, the necessary voltage, the number of trucks on-site and total application hours they must run, and operator charging discipline.

2. Where should you place electric forklift battery chargers?

To determine the right location for electric forklift battery chargers, it's important to consider your operators, facility layout and electrical infrastructure. Chargers should be placed in locations that are convenient for operators to access, particularly for charging strategies that include opportunity charging to top off the battery's state of charge during lunch or other breaks when the forklift is not in use.

3. How long does it take to charge an electric forklift?

Specific charging times vary based on the charger and battery type and size, but lithium-ion generally offers fast recharging times and enables opportunity charging. For example, a lead acid battery typically requires about 20 minutes for the operator to switch out the battery, followed by approximately 16 hours of charging and cool-down time. By comparison, some lithium-ion forklifts like the J50-60XNL can fully charge in less than an hour.

4. Who can charge and change batteries in electric-powered forklifts?

The Occupational Safety and Health Administration (OSHA) requires that only trained personnel charge and change batteries in electric forklifts. However, unlike lead acid batteries, lithium-ion batteries have a simpler charging protocol because they do not need to be removed from the truck to charge.

// TRAINING

1. **Do operators need special training for electric forklifts?**

   Regardless of the forklift power source, be it electric or ICE, OSHA requires that forklift operator training must cover topics tailored to both the specific type of truck that the operator will be using, such as controls, operation and refueling or recharging, as well as the particular worksite.

2. **Do electric forklifts require special technician training for maintenance?**

   The answer depends on the particular forklift. Not all electric-powered materials handling equipment is high-voltage. Still, high-capacity electric forklifts can be high voltage, and there are important safety standards operations must understand to prevent electrical danger or injury.

// OTHER QUESTIONS

1. **What is the difference between electric forklifts and internal combustion engine (ICE) forklifts?**

   While electric forklifts are powered by batteries or hydrogen fuel cells, ICE forklifts are typically fueled by propane, gas or diesel. These different power sources each have their own unique characteristics including their carbon emissions profile, operating costs, power output and requirements for maintenance, space and operator involvement.

2. **What if there is a power outage in my area?**

   A contingency plan can help you mitigate equipment downtime in the event of a natural disaster or other issue that causes a temporary power outage. Local dealers often have ICE rental forklifts on hand that could provide support in case of an unexpected outage.

Haven't found the answer you're looking for? Our team can answer it.
Find your local dealer.

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