



Benefits of Going Green with Your Forklift Fleet – IC vs. Electric

There is little doubt that the world is looking for cleaner and more responsible products to use in nearly every facet of life. So it only makes sense that forklift companies and their suppliers would be looking at alternative and cleaner burning energy sources. The surprise is that technology is allowing manufacturers to build forklifts that not only reduce carbon footprints, but also use less energy, cost less to operate, and in many instances, are providing as much power as their internal combustion counterparts. This is leading to an obvious shift in the market and is prompting many manufacturers to invest more into research and development of this emerging trend.

Electric forklifts represent nearly 60% of the forklift market today, up from just 45% twenty years ago, and for good reason. More and more companies are realizing lower operating costs, including maintenance and fuel, reduced emissions in their facility and longer life out of their fleet. The major benefits of choosing electric forklifts include:

1. **Reduced costs** – Fewer moving parts and less heat mean lower operating costs.
2. **Reduced fuel costs** – If used appropriately, batteries and chargers cost less than LP, and energy costs are more stable.
3. **Reduced emissions** – No output of carcinogens and carbons means improved operating conditions and better health for your employees.
4. **Improved operator ergonomics** – IC engines produce not only emissions, but also vibration and heat, both of which contribute to operator fatigue.

The introduction of AC technology has been a major advancement of electric material handling equipment. With the elimination of brushes, contactors and commutators, fewer parts need to be replaced, meaning reduced operating costs. But beyond this, a lot of the advancement is coming from the power supply, your battery and charger. While manufacturers work to improve the efficiency and power of their forklifts, battery companies are working to provide the power in more efficient and convenient ways.

One of the major advancements in power supply for electric forklifts has been the Variable Frequency Charger. VFC's allow much more flexibility in how you charge your batteries and can reduce battery maintenance. In addition they can also dramatically increase the life of your forklift batteries particularly if your operators are prone to opportunity charge, which happens to be a major cause of premature battery failure.

Battery & charger manufacturing companies are leading the way in forklift battery charger options. Engineering chargers and batteries that work the way you need them to work have been the key to designing combinations that provide the right amount of power for the right amount of time, and under the conditions you use them.

Traditionally a multi-shift operation needs two or more batteries, 8 hours of charging, 8 hours of cooling and multiple chargers for varying voltage batteries. When the power begins to fade at the end of the shift, the



operator is faced with the decision of changing batteries or opportunity charging (plugging in for short periods of time when it's convenient). We know that the decision tends to be opportunity charging and this affects battery life and increases costs. Variable Frequency Chargers have changed all of that. The major benefits of Variable Frequency Chargers include:

1. One charger can charge 36, 48 and 80 volt batteries.
2. They use electricity much more efficiently.
3. They can be programmed to charge at night, when electricity may be cheaper.
4. Opportunity charging is no problem for a Variable Frequency Charger.
5. The 8 hour cooling period is eliminated. This can cut the number of batteries you may need down to one per forklift.
6. Battery does not have to be depleted before charging begins.

Matthai Material Handling is proud to represent the Linde line of high quality electric forklifts. And with power supplies up to 80V, a Linde can easily replace many heart-of-the-line internal combustion counterparts with an electric lift truck that will pull the same duty, while putting significant savings to your bottom line.

There has never been a better time to “go green” and take advantage of the advancements made in operating an electric forklift fleet. By doing so you will have a safer and cleaner facility, reduced operating costs, and you will leave a smaller footprint behind while you improve the profits of your material handling operation. Going green can provide your company with many benefits. To be sure you are setting up the right electric powered system we recommend the following:

1. Consult with a dealership that has a great deal of experience with electric material handling equipment and can help you make the right choice.
2. Talk with your operators to find out how they would use the new equipment, what would be most convenient for them, and how they use their LP equipment right now.
3. If you have a large operation and can segment one department or facility, start there. You can then tweak your program as you implement it in other areas.
4. Be sure you are working with a partner that can help you select the right battery and charger combination.
5. Be sure regular battery and charger maintenance is part of the plan. Properly maintained batteries and chargers provide a much longer life and work more efficiently.

You can count on Matthai Material Handling to be a reliable source for consulting to determine which lift trucks are right for your operation. Give us a call, you will be glad you did.