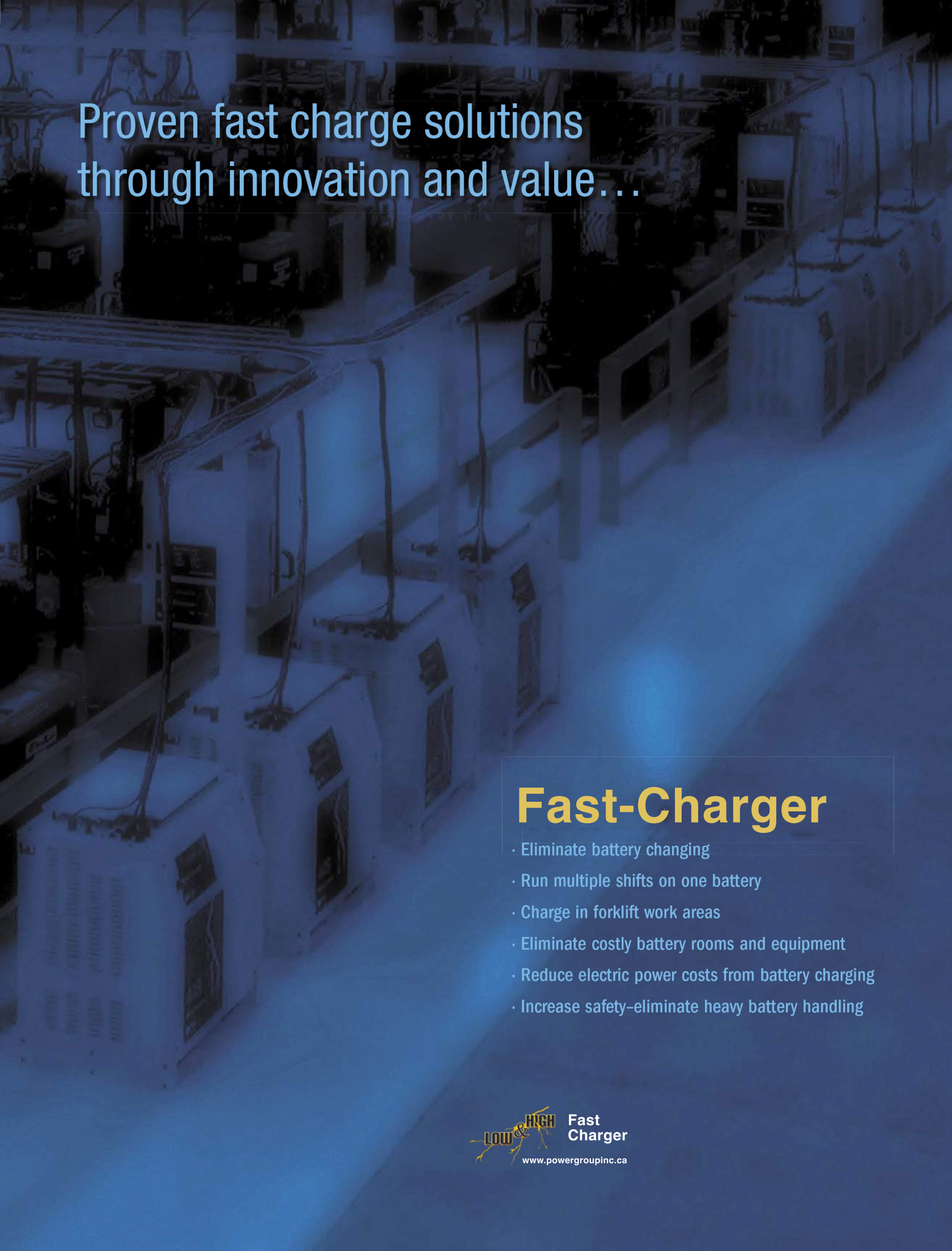




Proven fast charge solutions
through innovation and value...

Fast-Charger

- Eliminate battery changing
- Run multiple shifts on one battery
- Charge in forklift work areas
- Eliminate costly battery rooms and equipment
- Reduce electric power costs from battery charging
- Increase safety—eliminate heavy battery handling



Fast
Charger

www.powergroupinc.ca



A history of breakthrough innovations and trend-setting firsts

About Low & High's Fast Charger

- In 1996, *Fast-Charger* originated and demonstrated the revolutionary technologies that allowed fast charging of lift trucks.
- Since 1998, *Fast-Charger* has provided competitive advantage to our customers by delivering breakthrough operational methods to recharge lift trucks.
- Our proven fast charge technologies are unique as evidenced by over 50 US and International patents since 1990.
- We continue to lead the revolution in recharging lift trucks by providing superior value through continuous innovation—all backed by long-term proven performance and commitment to service.

Breakthrough dates

2004

First fast charger to introduce integrated battery water level display.

2003

First fast charger to provide extensive equipment and fleet performance data

2002

First to exceed four years of battery life in commercial use—confirming previous lab results.

2000

First new Distribution Center built with *Fast-Charger*

1999

First full conversion of a facility using *Fast-Charger*

1998

First *Fast-Charger* commercial installation.

1996

First fast charge application to industrial lift trucks.

1992–1995

Fast charging technology development for motive applications (electric cars, buses, lift trucks, ground support equipment).

1990

Fast charge developed for handheld devices.



Lift truck, pallet jacks and tug charging costs are vastly reduced through Fast-Charger—customers enjoy up to 70% cost reduction in charging operations

For over 6 years Fast-Charger has cut lift truck operating costs by safely recharging batteries—at up to 4 times traditional charger rates—while the battery remains in the truck. By eliminating battery changes our customers realize significant benefits:

Cost Savings

- Eliminate battery room or charging area and change equipment
- Increase productivity by eliminating wasted time changing batteries
- Reduce number of batteries to only one per truck
- Reduce truck & battery maintenance
- Reduce electrical costs

Safety

- Eliminating battery changes reduces risk of personnel injury during the battery change operation
- Pedestrian safety is enhanced by reducing lift truck traffic racing back to the change area
- Batteries remain in the truck and handling heavy batteries is avoided

Simplification

- One truck and one battery connected to a charger while the operator takes his usual break.
- Operator merely connects the truck to a charge station to recharge battery.

How Fast-Charger works to reduce your costs—all day long, everyday...



1
Connect

At the first normally scheduled break the operator proceeds to the Fast-Charger conveniently located near the break room. The operator quickly connects the truck and proceeds on break.



2
Charge

While the operator is on break, Fast-Charger performs a battery health check and automatically determines battery voltage, capacity and state of charge, then safely delivers the needed charge. The operator merely “connects and forgets.”



3
Return to work

At the conclusion of the break, the operator disconnects the truck and returns to work.



Why Fast-Charger beats the

Battery Changing vs. Fast-Charger

Slow down or halt of operations due to inadequate state of charge (SOC) in lift trucks is absolutely not acceptable. With traditional battery changing, you replace a depleted battery with a freshly recharged unit, which requires extra batteries and equipment, operator work time and other costs.

Compare battery changing to **Fast-Charger**. One battery per truck, *total!* Battery charging occurs at normally scheduled operator breaks and lunch periods—so work effort is never interrupted. Charging occurs with the battery on-board—no heavy lifting! And one battery charger can serve multiple lift trucks—all without any change-out of equipment.

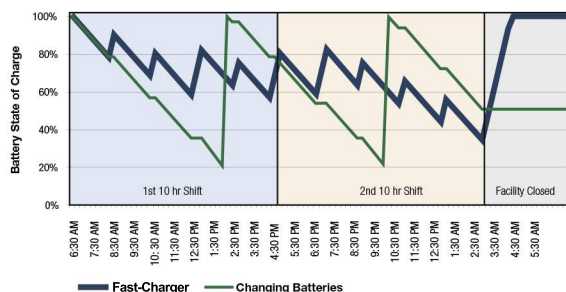
Highest Safe Charge Rate

Since 1996, **Fast-Charger** products have charged lift trucks with charge rates up to 600 amps—4 times higher than typical rates. **Fast-Charger's** patented charge technology is the only control technology that adjusts charger output based on real time multi-cell sensing of electrochemical reactions, auto-adjusting as battery conditions change and the battery ages.

By contrast, competitor fast chargers resort to primitive control methods that depend primarily on temperature. This primitive approach can result in excessive battery temperatures and usually requires extra-cost air-gapped batteries and retrofit lift truck fans to cool the battery in even moderate duty applications.

Fast-Charger vs. Charging Batteries

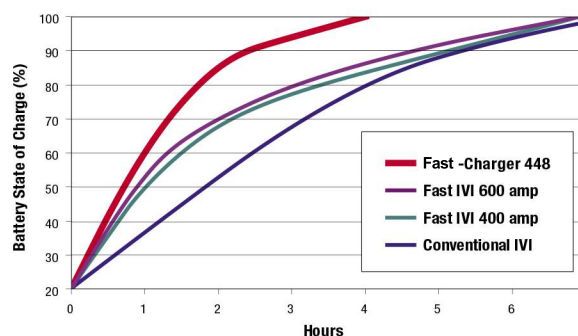
Two 10 hr shifts, Sitdown Truck w/ 850 Ahr Battery
Heavy Duty 105 Amp-hr Discharge—24 Hr Cycle



Strategies are also available for three-shift, seven-days-a-week operations.

Charging 1000 Ahr Battery

at operating temperatures



Fastest battery-safe charge return rates when compared to I-V-I temperature compensated fast chargers.



Long Battery Life

Fast-Charger has the longest record of fast charge commercial installations. Our customers routinely experience battery life in excess of manufacturer warranties—with some reporting over 50% greater battery life over typical 3 year warranties. Fast-Charger's patented charge control and patent pending anti-stratification technologies assure safe high-charge rates and long battery life.

Fast-Charger BICC on-board battery module senses the battery, controls the charge and provides 20 data recording functions for 2000 cycles for system and fleet performance evaluation.

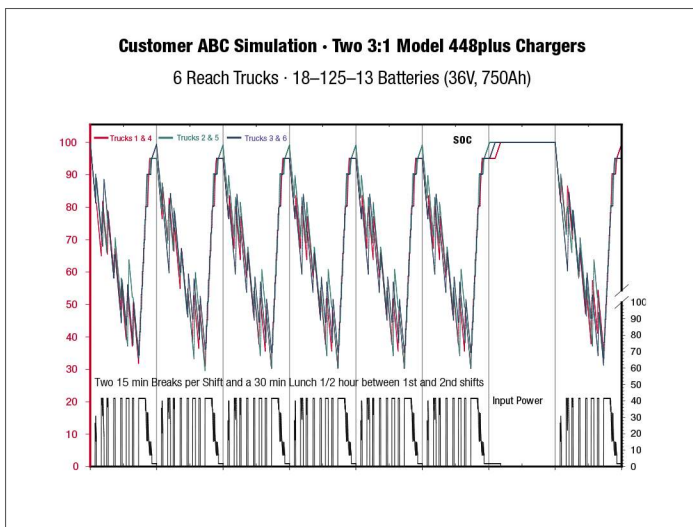
competition hands down...

Low Facility Power Demand

Fast-Charger patented technologies delivers:

- Highest Charge Efficiency—up to 97%
- Low Connected Load
- Low Facility Peak Power Demand
- Reduced circuit count

Only Fast-Charger offers a combination of Dedicated, Priority Charge and Simultaneous (Parallel) charge technologies to provide the right combination to manage power requirements. And Fast-Charger's experience with switch mode, high frequency and enhanced SCR power technologies provide the right combination for any requirement.

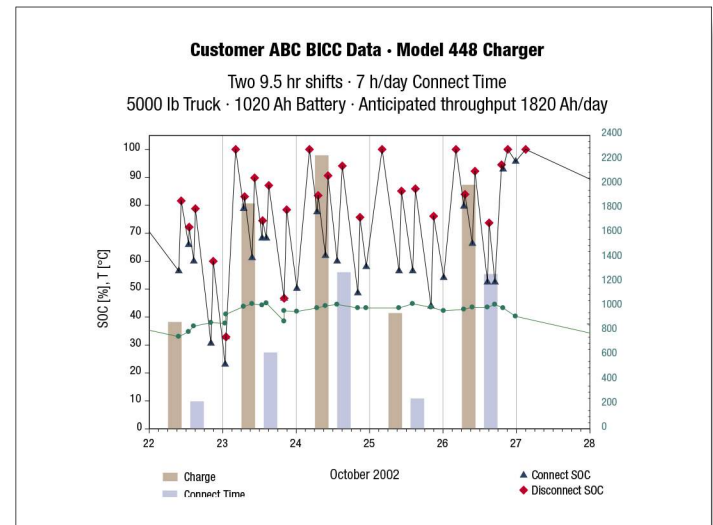


Fast-Charger technologies and operational charge strategies can reduce peak power demand to less than that of single or parallel chargers—yet keep the trucks running all day.

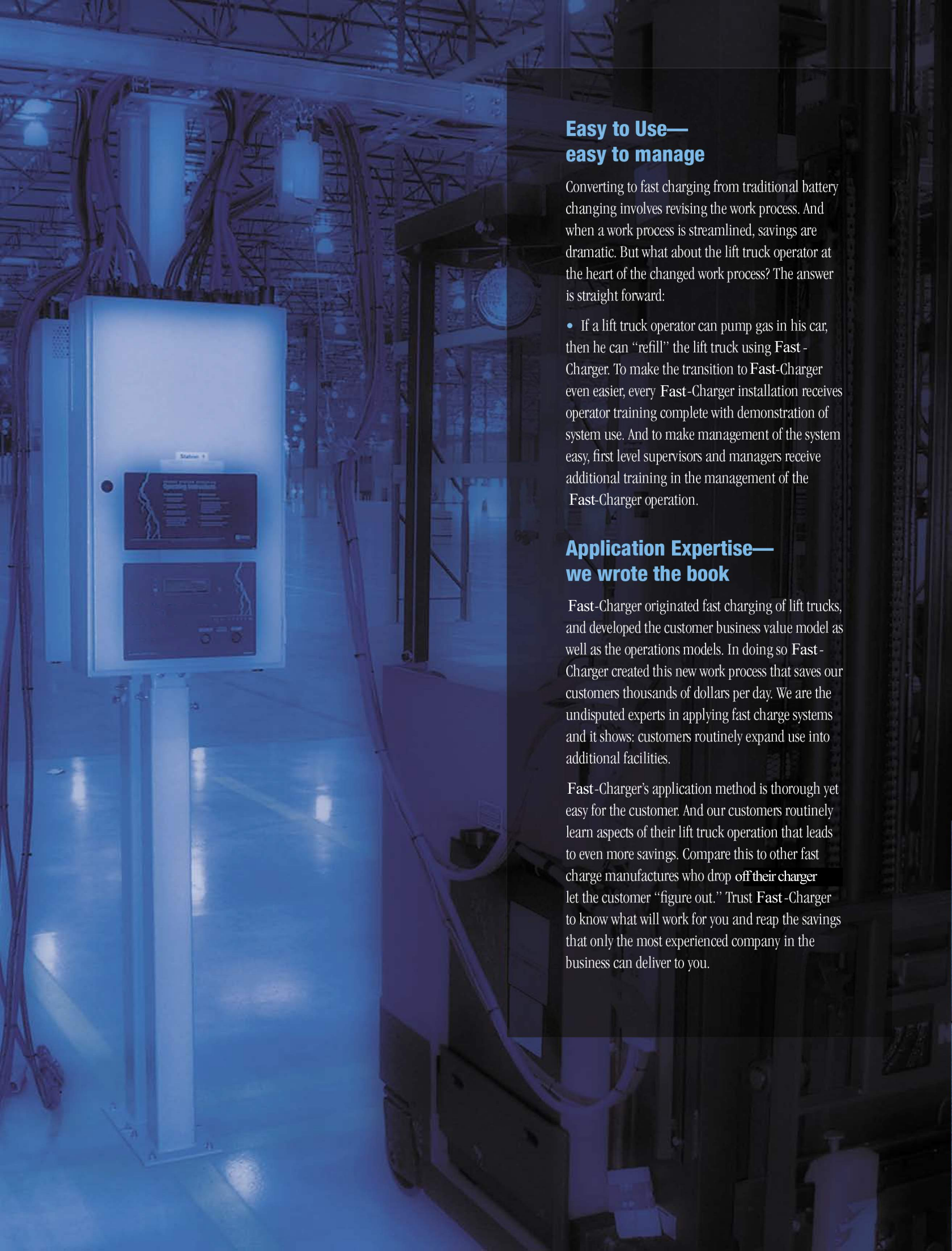
Superior System & Fleet Information

Every Fast-Charger high rate charger for lift trucks comes with Fast-Trak™—the trend setting truck/battery and charger information and management system. Downloaded from the truck to your laptop and processed with Fast-Charger's proprietary software, Fast-Trak reveals truck energy consumption, battery health and performance, charger system function and operator system use.

Customer benefit: Informed decisions on equipment performance, fleet effectiveness and rapid isolation of trouble areas for corrective action.



Fast-Trak allows facility management to “see” the performance of the lift truck fleet—the end result: informed decision-making.



Easy to Use— easy to manage

Converting to fast charging from traditional battery changing involves revising the work process. And when a work process is streamlined, savings are dramatic. But what about the lift truck operator at the heart of the changed work process? The answer is straight forward:

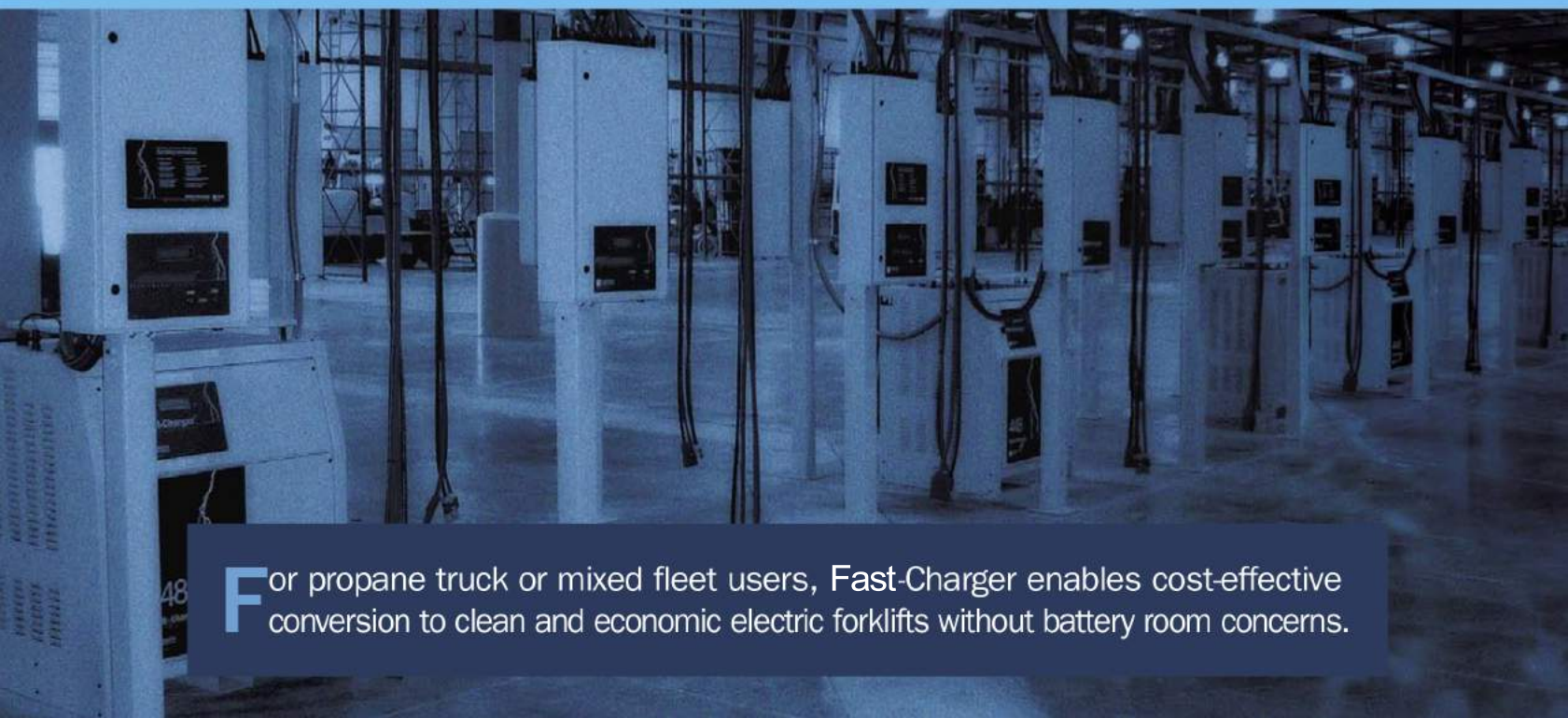
- If a lift truck operator can pump gas in his car, then he can “refill” the lift truck using Fast-Charger. To make the transition to Fast-Charger even easier, every Fast-Charger installation receives operator training complete with demonstration of system use. And to make management of the system easy, first level supervisors and managers receive additional training in the management of the Fast-Charger operation.

Application Expertise— we wrote the book

Fast-Charger originated fast charging of lift trucks, and developed the customer business value model as well as the operations models. In doing so Fast-Charger created this new work process that saves our customers thousands of dollars per day. We are the undisputed experts in applying fast charge systems and it shows: customers routinely expand use into additional facilities.

Fast-Charger’s application method is thorough yet easy for the customer. And our customers routinely learn aspects of their lift truck operation that leads to even more savings. Compare this to other fast charge manufactures who drop off their charger let the customer “figure out.” Trust Fast-Charger to know what will work for you and reap the savings that only the most experienced company in the business can deliver to you.

Since the first commercial installations in 1998, Fast-Charger has a proven record with multiple, repeat Fortune 500 and Global 1000 customers...



For propane truck or mixed fleet users, Fast-Charger enables cost-effective conversion to clean and economic electric forklifts without battery room concerns.



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