



POSICHARGE ProCore™ with Advanced Connect Rx™



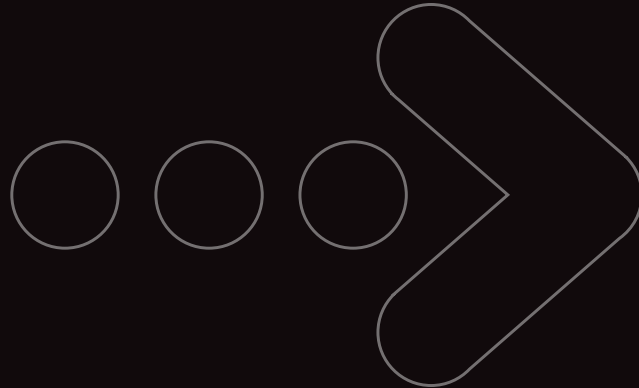
INTELLIGENT FAST CHARGING SYSTEMS FOR ELECTRIC MATERIAL HANDLING EQUIPMENT

POWERED YOUR WAY

Maximize your fleet performance with
PosiCharge ProCore.™

posichargeprocore.com





Contents

| | |
|--|----|
| Why Go Electric?..... | 4 |
| The PosiCharge™ Advantage..... | 5 |
| PosiCharge vs. Battery Changing..... | 6 |
| Introducing: PosiCharge ProCore™ | 8 |
| Features & Specifications..... | 10 |
| About Us..... | 18 |
| Contact Us..... | 19 |



Why Go Electric?

COMMON MISCONCEPTIONS ABOUT ELECTRIC FLEETS

01

Electric trucks are too expensive.

FACT

Electric lift trucks *cost less to own* over their Lifetime than comparable ICE lift trucks. Lower operating costs, reduced maintenance and improved safety make electric lift trucks a better investment

02

Electric fleets require space-wasting battery-changing rooms.

FACT

PosiCharge fast chargers eliminate the need for battery-change rooms. Batteries are charged during scheduled breaks and shift changes without ever leaving the vehicle.

03

Electric trucks aren't as powerful.

FACT

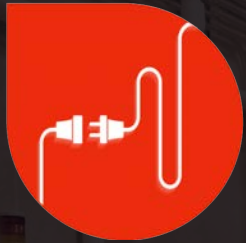
Modern electric forklifts perform side-by-side with their ICE counterparts, while being safer and less expensive to operate under most circumstances.

04

Fast charging harms batteries.

FACT

With our unique algorithms, battery monitoring, and heat management technology, our PosiCharge fast chargers can actually extend the life of your batteries by almost 40%, and reduce your battery inventory by 50%.



THE POSICHARGE™

Advantage

EXPERIENCE AND EXPERTISE

- Pioneered fast charging technology
- World's largest supplier of fast charging systems
- More than 25,000 chargers at over 750 facilities charging over 25,000 vehicles
- State of the art battery research center

RELIABILITY

- Proven to extend battery life and surpass battery warranties

BREADTH OF APPLICATIONS

- Universal battery charging: any battery chemistry, brand, size, voltage
- Only charger rated for sub-zero applications
- Only solution with automatic battery watering
- Only thermal management solution for heavy-use vehicles

CORPORATE STRENGTH

- Financial strength and stability (AVAV on NASDAQ)

POSICHARGE

vs. Battery Changing

Savings Summary

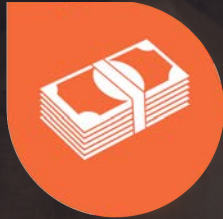
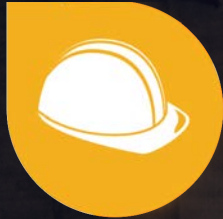
01 Reduce energy consumption by 18% vs. standard practices

02 Return up to 70% in operating cost and capital expenditure savings per facility

03 Deliver 100% material handling operator uptime

04 Eliminate \$\$\$\$ in battery room infrastructure and personnel costs per facility

- *Eliminate need for special ventilation, eye wash and other PPE*
- *Eliminate need for floor drains and acid neutralization*



INNOVATION // QUALITY
SUSTAINABILITY // RELIABILITY
SAFER WORK ENVIRONMENT
BIG SAVINGS

05 Reduce electric forklift battery inventory by 50%

- *Reduce battery maintenance costs by more than half*

06 Improve facility velocities without expanding facility footprint

- *Streamline workflow*
- *No waiting at the battery room*

07 Improve working conditions by dramatically reducing:

- *Worker injuries related to battery handling*
- *Accidents related to cross-plant traffic*
- *Hazardous material spillage*

08 Show your company's green leadership and help achieve corporate social responsibility goals:

- *Reducing one facility's annual CO2 footprint*
- *Reducing each facility's lead, steel, and sulfuric acid consumption*



POSICHARGE ProCore™



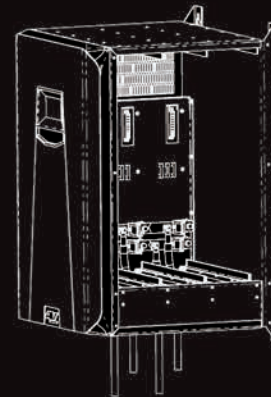
The PosiCharge ProCore™ Series is a premium intelligent charging family that supports and charges any material handling battery - regardless of type, brand, chemistry, voltage or size. With power ranges from 5kW to 30kW, multi-voltage flexibility and value-added options, ProCore is ideal for your entire fleet.

INDUSTRY'S FIRST FORKLIFT BATTERY CHARGER

to enable charger configuration
and management via
smartphone app



SPECIFICATIONS



| | | | | | | |
|---|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| POWER RATING | 5 kW | 10kW | 15kW | 20kW | 30kW w/single cable | 30kW w/dual cable |
| MAX OUTPUT CURRENT 24/36/48V | 160/111/83 | 200/200/167 | 320/320/250 | 400/400/320 | 400/400/400 | 500/500/500 |
| MAX OUTPUT CURRENT 48/72/80V | N/A | 160/111/100 | 250/167/150 | 320/222/200 | 400/333/300 | N/A |
| CIRCUIT BREAKER RATING 480VAC | 10A | 15A | 25A | 40A | 50A | 50A |
| IDLE POWER | <10W | <10W | <10W | <10W | <10W | <10W |
| DIMENSIONS, H x W x D | 31.5" x 20" x 10.5" | 31.5" x 20" x 10.5" | 31.5" x 20" x 15.2" | 31.5" x 20" x 15.2" | 31.5" x 20" x 20" | 31.5" x 20" x 20" |
| WEIGHT | 86 lbs | 91 lbs | 144 lbs | 144 lbs | 190 lbs | 196 lbs |
| INPUT VOLTAGE SKUs FOR NOMINAL 380V, 400V, 415V, 440V, 480V (50/60HZ) | Y | Y | Y | Y | Y | Y |

KEY FEATURES

- 1** HI FREQUENCY POWERSTAGE
.....
for a more efficient, smaller, lighter charger
- 2** MULTI VOLTAGE / MULTI-AH CAPABILITIES
.....
allow different batteries to charge on the same charger
- 3** BMID, NON BMID AND CAN COMPATIBILITY
.....
gives basic or advanced control options
- 4** BMID CONTROLLED EQ
.....
allows battery to go to any charger and get a complete EQ every week
- 5** ADVANCED CONNECT RX™
.....
provides unparalleled safety by detecting potential connector and cable-related issues



- 6** MODULAR POWERSTAGES
.....
for quick upgrade, redundancy, serviceability, and repair
- 7** LOW CURRENT RIPPLE
.....
prolongs battery life
- 8** CHARGER PERFORMANCE MONITORING
.....
to track charger usage
- 9** COLORFUL DIGITAL INTERFACE
.....
makes it easy to read and understand charger operations
- 10** FUTURE PROOF
.....
able to charge new battery chemistries such as lithium



The Most Efficient Chargers for Your Forklift Fleet.

ProCore is easy to use and provides extreme flexibility with multiple customization options. A small, lightweight, powerful, highly efficient charger that takes up minimal floor space, ProCore requires no specific training to mount, install and update.

HIGH PEAK EFFICIENCY & LOW OVERCHARGE FACTOR

Increased battery life
& efficiency means
more money saved

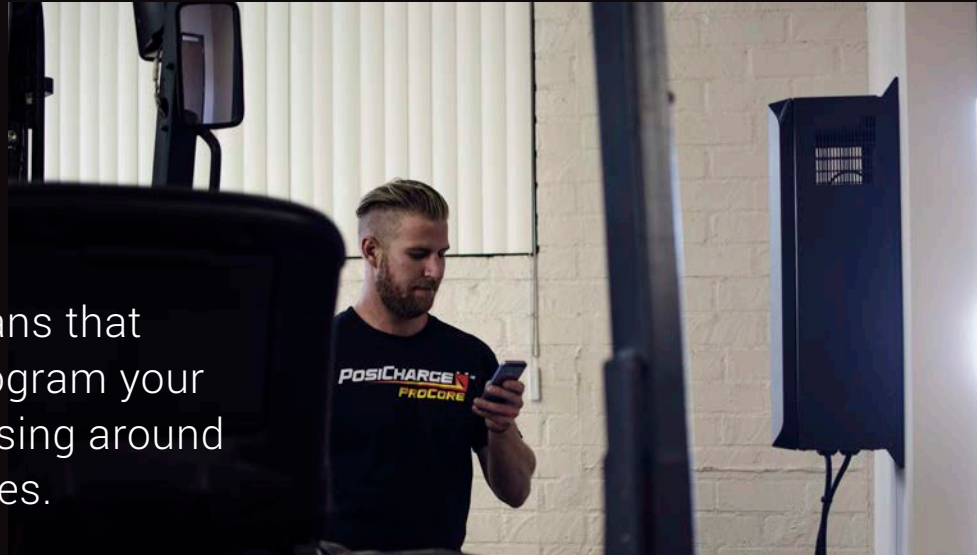
>93% Peak Efficiency

ProCore protects and
increases the lifespan
of your batteries.

make ProCore *the most efficient charger*
available with *the lowest monthly utility costs.*

Mobile Access & Control

Our convenient digital app means that you can easily connect and program your ProCore chargers without messing around with bulky laptops or data cables.



Set up new units, program, troubleshoot, make changes to your fleet – and more – all from your iOS or Android smartphone.



Compatible with iPhone 4S or newer, iPod 5th Gen or later, iPad 2nd Gen or later, or Android device 4.3 or later. Search for the **PosiCharge ProCore™** app in your iOS or Android App Store.



POWERED YOUR WAY.

With ProCore, you've got options. ProCore's modular powerstages bring the ultimate in flexibility to your operation.

Have a mixed fleet or a large operation with different types of forklifts? ProCore's multivoltage capabilities are here to give you choices – and simplify your life. It doesn't matter what type of battery you have - different forklifts with different batteries can charge on the same charger.

ProCore™ INSTALLATIONS



PROCORE 10KW WALL-MOUNTED & 20KW PEDESTAL-MOUNTED UNITS





ADVANCED CONNECT RX™

Advanced Cable Connector Health Monitoring Technology

Advanced Connect Rx™ enables industry-leading operational safety for charging electric forklifts by providing early warning of high connector temperatures with an innovative dual set point sensor for warning and fault levels.

Everyday usage causes wear and tear on charging cable connectors, from connecting and disconnecting the charging cables to repeated drops. Often the first sign of a problem is an operator complaint of high connector temperatures, or a complete failure in the charging connection.

With **Advanced Connect Rx™** you're given a warning before these problems arise and potential damage, or lost productivity, occurs.

As soon as there is an abnormality detected it immediately alerts users to possible charger and battery output connector problems that could potentially result in damage to the forklifts or facilities, and injuries to employees. This gives users and facilities managers the ability to address problems before they become costly or potentially hazardous.

Advanced Connect Rx™ is a standard feature on the **PosiCharge™ ProCore™**, and can be enhanced with an optional battery cable connector monitor that adds an additional layer of protection. Combined with our anti-arc technology, battery thermal management and sophisticated charging algorithms, **Advanced Connect Rx™** gives you unparalleled operational safety.



UNPARALLELED SAFETY

- 1** Advanced Connect Rx™ is a standard feature on PosiCharge ProCore™
- 2** Provides early warning of high connector temperatures with an innovative dual set point sensor for warning and fault levels
- 3** Enables users to address overheating connectors before problems arise and potential damage occurs



Lower Costs. Amp Up ROI.

It's simple: prolonging battery life means saving money. ProCore protects your battery investments – and increases lifespan by enabling the battery and charger to 'speak' to each other.

It's also programmable. You can run ProCore in blackout or power limit mode – and operate chargers at reduced (or zero) power levels to manage peak utility demand periods.

ADDITIONAL FEATURES

- CERTIFIED to the highest industry product safety standards
- LIGHTER WEIGHT for easier installation and additional mounting options
- MULTI-INPUT BREAKER SELECTION offers installation flexibility and upgrade capability
- COMPLIANT WITH CEC STANDARDS by exceeding the minimum efficiency and idle power consumption set by the California Energy Commission
- POWER MANAGEMENT TOOL enables full programmability to plan for peak utility demand periods
- CAN CAPABILITY enables chargers to talk to advanced batteries
- PLC CAPABILITY enables chargers to talk to AGVs and mobile robots
- OFF THE FLOOR MOUNTING saves floor space and gives multiple mounting options
- REAL TIME BATTERY TEMPERATURE / VOLTAGE MONITORING AND COMPENSATION enable precise charge control and monitoring of batteries for fastest and safest charging
- STACKLIGHT OPTIONS for visual notifications of the battery / charger status
- AUTOWATER CONTROL OPTIONS for optimal battery watering during the equalization cycle

AeroVironment, PosiCharge's parent company, has been developing breakthrough power electronics and battery management technologies for over 30 years. PosiCharge systems - the most advanced line of fast chargers available today- is a product of this rich heritage.

AeroVironment is a technology solutions provider that designs, develops, produces, supports and operates an advanced portfolio of electric transportation solutions and electric-powered Unmanned Aircraft Systems (UAS). AeroVironment's comprehensive EV charging solutions include the portable, dual-charging (120/240V) TurboCord, EV home charging, public charging, fast charging, data collection, grid-integrated communications and complete installation, training and support services for consumers, automakers, utilities, government agencies and businesses. AeroVironment's industrial electric

vehicle charging systems support thousands of electric materials handling vehicles in mission-critical supply chains for Fortune 500 enterprises. AeroVironment's power cycling and test systems provide EV developers and EV battery manufacturers with market-leading simulation and cycling capabilities. The company's electric-powered, hand-launched unmanned aircraft systems generate and process data to deliver powerful insight, on-demand, to people engaged in military, public safety and commercial activities around the world. More information is available at www.avinc.com and www.posicharge.com.

1987

Developed the GM Sunraycer, winner of the Solar Challenge race across Australia



1989

Co developed the GM Impact, precursor to the GM EV-1, the world's first modern electric car



1999

First high-efficiency industrial rapid charger developed for the US Air Force



2005

Selected by Ford Motor Company to support enterprise-wide fast charge initiative for their material handling equipment.



2011

Battery Rx - First cellular connected battery monitor for the material handling market. Delivers actionable data in real time without costly infrastructure or IT dept involvement





PROCEED
WITH
CERTAINTY

CONTACT US

- to REQUEST A QUOTE
- to find out if PROCORE is the right fit for your operation, or
- to see if you qualify for our LP TO ELECTRIC LIFT TRUCK CONVERSION Consulting Services

VISIT

www.posicharge.com

Customer Service: 1.866.767.4242

customerservice@avinc.com

For parts, email: avparts@avinc.com

2014

TurboCord™ is the world's first dual voltage (120/240V) ultra-compact charging device



2015

TurboDock™ is a smart Commercial & Workplace charging station with Bluetooth enabled access control



2016

Posicharge ProCore™ Industry's first forklift battery charger to enable charger configuration and management via mobile phone app.



VISIT US AT POSICHARGE.COM



PosiCharge™ systems, a product line of AeroVironment, Inc.
1.866.767.4242 | info@posicharge.com
© 2017 AeroVironment, Inc.

posichargeprocore.com

posicharge.com

[@posicharge](https://www.instagram.com/posicharge)

