

CROWN

VFORCE

# V-HFM<sup>3</sup> SERIES

High-Frequency Modular Chargers



# So Versatile

It's Quite Possibly the One Battery Charger to Satisfy Every Need

**We're revolutionizing modular charging with the smart, connected and efficient V-HFM<sup>3</sup> Series battery charger.**

With advanced intelligence, impressive efficiency and broad connectivity, the V-HFM<sup>3</sup> Series charger simplifies and enhances the charging process to keep your forklift fleet moving. Our scalable design accommodates your changing business needs and future technology growth, including lithium-ion batteries, to offer low total cost of ownership. It all adds up to an impressive return on your investment.

Visit [crown.com](https://crown.com)

See the V-HFM<sup>3</sup> Series



**Increase Productivity and Reduce Downtime with Responsive Service and Support**

Crown's expansive service network of technicians and motive power specialists, supported by extensive parts availability, can provide the maintenance and consulting services you need to leverage your power investment.



## Reduce Power Consumption and Energy Costs

With efficiency levels up to 97 percent, the V-HFM<sup>3</sup> Series charger is more efficient than other high-frequency chargers on the market. And, we've packed more power into a smaller, stackable footprint that saves space and AC infrastructure. Compared to other high-frequency chargers, the V-HFM<sup>3</sup> Series is compact, lightweight and power dense.



## Smart Charging with Advanced Intelligence

Smart sensors and intelligent displays make battery charging safe and easy. Automatic voltage sensing identifies a battery upon connection and applies the correct charging profile from 24-96 volt without the use of a monitoring device, enabling one charger to take the place of many. High-visibility indicators and a color display provide quick indication of each charger's current state while easy-to-read, LED indicator lights inform operators of charging status, cooling time, and equalizing and watering needs at a glance.



## Flexibility to Meet Your Changing Needs

With its modular design, the V-HFM<sup>3</sup> Series charger can be easily scaled to fit evolving charging requirements. Whether you need to charge lead-acid or lithium-ion batteries, upgrade hardware or software, or utilize conventional, opportunity and fast charging methods, our unique charger design incorporates new technology and battery charging needs to enhance compatibility for today and the future.

As your business needs evolve, so does the V-HFM<sup>3</sup> Series charger. Multi-voltage capability enables one charger to be configured to charge virtually any lift truck in your operation, from 24-96 volts, and handle input voltages around the world, from 208 to 600 volts.



## Broad Connectivity Provides Seamless Integration

Multiple ways to access charger configuration and logs saves time and money. Integrating your battery charger with monitoring and management systems has never been easier. A built-in web browser accessible interface and support for Wi-Fi, Ethernet and USB connections means you can configure, monitor and complete diagnostics seamlessly, without the need for special apps, cables and software.



### Unleash the Power of Battery Management

Connection with Crown's V-Force<sup>®</sup> Battery Monitoring Identification Device (BMID) provides additional levels of control to increase battery health and longevity, including simplified battery watering. Automatic temperature compensation and battery electrolyte level monitoring can also be implemented during the charging cycle.

**24-96v**  
LEAD-ACID & LITHIUM-ION  
COMPATIBLE

## Specifications

| Model                                  | FS3<br>Three Phase                                      |      |       |        | FS4<br>Three Phase                        |      |       |      | FS6<br>Three Phase                        |      |       |      |
|----------------------------------------|---------------------------------------------------------|------|-------|--------|-------------------------------------------|------|-------|------|-------------------------------------------|------|-------|------|
| Battery Voltage Range                  | 24V, 36V, 48V, 72V, 80V, 96V                            |      |       |        |                                           |      |       |      |                                           |      |       |      |
| Main Voltage<br>(three phase)          | 208-240Vac<br>380-480Vac<br>480-600Vac                  |      |       |        | 380-480Vac<br>480-600Vac                  |      |       |      | 380-480Vac<br>480-600Vac                  |      |       |      |
| Module Configuration                   | One to Three Modules                                    |      |       |        | Two to Six Modules                        |      |       |      | Two to Six Modules                        |      |       |      |
| Efficiency                             | Up to 97%                                               |      |       |        |                                           |      |       |      |                                           |      |       |      |
| Battery Voltage vs. Charge Current (V) | 24/36                                                   | 48   | 72/80 | 96     | 24/36                                     | 48   | 72/80 | 96   | 24/36                                     | 48   | 72/80 | 96   |
| Max Charging Current (A)               | 300A                                                    | 255A | 150A  | 127.5A | 400A                                      | 400A | 300A  | 255A | 600A                                      | 510A | 300A  | 255A |
| Dimensions<br>(W x H x D)              | 12 x 9.5 x 14.5in<br>(305 x 240 x 365mm)                |      |       |        | 12 x 18.5 x 14.5in<br>(305 x 470 x 365mm) |      |       |      | 12 x 18.5 x 14.5in<br>(305 x 470 x 365mm) |      |       |      |
| Weight                                 | Maximum 37.4lbs (17kg)<br>with three modules            |      |       |        | Max 71.5lbs (32.5kg)<br>with six modules  |      |       |      | Max 71.5lbs (32.5kg)<br>with six modules  |      |       |      |
| Marks of Comformity                    | UL Listed, cUL Listed, CEC-BC Compliant                 |      |       |        |                                           |      |       |      |                                           |      |       |      |
| Charge Profile Options                 | Conventional, Opportunity, Fast and V-Force Lithium-Ion |      |       |        |                                           |      |       |      |                                           |      |       |      |

## Options and Accessories



### Wired Remote Control Kit Part # 396587-001

Allows control and status display via the remote control. Includes wired remote control with detachable cable, I/O expansion board with internal wiring loom, expansion board mounting standoff and DE9 mounting standoffs.



### Tower Light Kit Part # 396586-001

LED light indicates battery charge status from a distance. Includes 11.81 inch pole with mounting bracket, I/O expansion board with internal wiring loom, expansion board mounting standoff and DE9 mounting standoffs.



### Battery Monitoring Identification Device (BMID) Part # 396525-BT

Mounts on top of the battery to monitor battery health, control and optimize charging, detect low electrolyte levels and communicate watering needs. Adjusts charge rate based on voltage and temperature to ensure optimal performance.

## Models



**FS3**



**FS4**



**FS6**



**Crown Equipment Corporation**  
New Bremen, Ohio 45869 USA  
**Tel** 419-629-2311  
**Fax** 419-629-2099  
crown.com

Distributed by Crown Equipment Corporation  
Specifications subject to change.

Crown, the Crown logo, V-Force and the V-Force logo are trademarks of Crown Equipment Corporation.

Copyright 2018 Crown Equipment Corporation  
PF20000 08-18  
Printed in U.S.A.