

# New Features for U-Charge® 24XP Series Lithium Ion Batteries



The 24XP series modules are designed for material handling applications. Specific materials and elements were chosen to meet the demanding safety requirements of UL2580.

## Better in Every Way

Valence's lithium iron magnesium phosphate chemistry presents a preferred choice due to its inherent safety performance and fast charging capability. LiFeMgPO<sub>4</sub> offers twice the energy and thousands of cycles over lead acid.

## Multiple Sizes

The 24V batteries come in two standard sizes, Group 24 and Group 27, for easy drop-in replacement of lead acid.

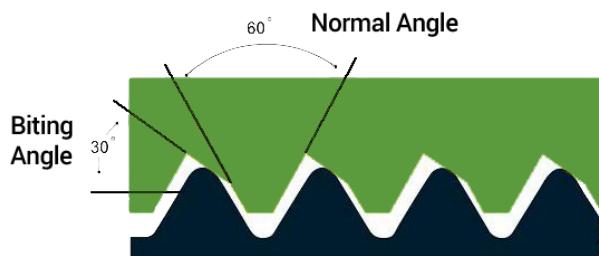
## Built Right, Built Tough

The 24XP series has been ruggedized to support the harsh environment forklifts and AGVs experience. An internal cell frame has been included to provide additional protection from severe vibration and mechanical shocks.

The terminals have been redesigned as well. Valence has incorporated a self-locking thread design to prevent hardware from loosening due to a unique feature located at the root of each thread.

When the bolt is tightly engaged, the tooth crest will press against a 30 degree wedge ramp generating locking force. This self-locking function is derived from the geometry of the female thread.

## Thread Locking Advantages



- Reliable anti-vibration and self-locking performance
- Free-turning torque is only needed when tightening, making it easy to assemble and disassemble
- Works with any standard M8 bolt
- No auxiliary locking items are needed such as lock washers, thread glues, etc.
- Does not lose its locking characteristics over time, even with multiple insertions

# User Friendly Terminals

In addition to Valence 24XP series terminals being internally monitored for temperature excursions, each terminal incorporates two M8 threaded holes. These can be used in a number of ways.

## High Current Situations

For high current situations, a user may choose to use a dual hole cable lug with 25.4mm (1 inch) centered holes. This provides maximum surface area reducing contact resistance. Dual bolts also provide redundant mechanical points.



## Parallel with Ease

It is easy to put Valence modules in parallel to increase capacity. To aid in cabling, the dual holes can be used separately allowing simple cable connection without having to stack lugs on top of each other.

## Standard Operation

For series configuration, a single lug and cable can be used, leaving one bolt hole unused. This will not impact normal operation.

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**North America Sales**  
1807 W. Braker Lane  
Suite 500  
Austin, Texas 78758 USA

Tel +1 (512) 527-2900  
Fax +1 (512) 527-2910

**Europe / Middle East / Africa Sales**  
Unit 63 Mallusk Enterprise Park  
Mallusk Co. Antrim  
Northern Ireland BT36 4GN

Tel +44(0) 28 9084 5400  
Fax +44(0) 28 9083 8912

[www.lithiumwerks.com/contact/](http://www.lithiumwerks.com/contact/)  
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