



CASE STUDY

Construction



Snorkel electrifies their Speed Level with Turntide batteries and system design expertise

Customer:

Snorkel is a global full-line manufacturer of aerial lifts dedicated to delivering safe, efficient, work-at-height solutions for people and materials. Snorkel produces more than 50 models available for platform heights ranging from 6 to 126 feet. The lifts are designed for applications from interior building maintenance to large-scale construction sites. The Speed Level is snorkel's flagship lift product, designed for challenging job sites and capable of scaling gradients up to 50%.

The Challenge:

Industry regulation and customer demand are pressuring the construction industry to decarbonize. Snorkel, already ahead of the curve in electrifying its equipment, wanted to rapidly develop a battery-powered Speed Level as proof of concept. Given the iterative nature of design and the necessity of quick integration, Snorkel needed a partner with experience designing and building electric drive systems. Snorkel specifically required a modular battery solution that could scale to support their wide range of vehicles.



"Turntide was not just a battery supplier. Their extensive experience with developing electric power systems was invaluable in helping us take our product to market quickly."

Jason Moody

Head of Engineering, Snorkel



The Solution:

Turntide's integration experience and expertise in designing proofs of concept helped enable Snorkel's speed-to-market strategy for their electric Speed Level. Close collaboration between the two teams allowed Turntide to understand the Speed Level's duty cycle and performance demands, so they could design a solution with the optimal battery chemistry and specifications to meet vehicle demands. They then worked with Snorkel's engineers to develop the modular battery system and provide guidance on integrating the battery with the controllers to enable a full drivetrain solution.

The Results:

Turntide met the deadline for proof of concept for a modular system that could scale up to work with a range of Snorkel machines. With Snorkel's own electrification capabilities and the proof of concept for the modular battery system, they successfully launched the electric Speed Lift, gained market share, and remained competitive.

Advantages of using electric machines for construction versus diesel:

- High torque with comparable power and performance to the diesel models
- Lower maintenance and energy cost
- Better air quality for indoor use
- Nearly silent engine enabling extended work hours on construction job sites because vehicles do not violate noise regulations



Turntide HY Energy PLUS

Voltage Range:

**43.4V/58.1V (51.8V Nominal)
per Battery**

Max Capacity:

5.76kWh/111.4Ah per Battery

Continuous Current Charge/
Discharge:

132A/130A per Battery



Today Turntide provides the battery systems for the Speed Levels and other Snorkel machines as the relationship continues to develop. To find out more contact us at sales@turntide.com

TURNTIDE TECHNOLOGIES

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries

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