SKYCLIMBER®
Vertical Assist System

Sky Climber

Vertical Assist System (VAS)

(U.S. Patent No. 12460432, and patents pending)

RELIABLE VERTICAL ACCESS FOR WIND TURBINE TECHNICIANS

A compact, ladder-mounted platform designed for safe, efficient ascent — reducing fatigue and improving technician mobility in tower environments.

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UL Certified.
ANSI Tested.

Vertical Assist System

Single-Technician Ladder-Mounted Platform

The Vertical Assist System from Sky Climber Renewables is a powered, single-user access solution engineered for permanent installation inside wind turbine towers. By replacing manual ladder climbing with ride-on mobility, the system increases productivity, minimizes technician strain, and contributes to long-term workforce sustainability.

With decades of access innovation behind it, Sky Climber Renewables brings a field-proven approach to vertical transport--built for real conditions, field demands, and the next generation of turbine maintenance. The Vertical Assist System integrates seamlessly into existing tower infrastructure, providing safe, repeatable access from base to nacelle.

Engineered for performance. Trusted for safety. Proven worldwide.

NO MORE CLIMBING

The Vertical Assist System (VAS) from Sky Climber Renewables eliminates the need for physical climbing. This rider-based platform allows technicians to ascend and descend safely and effortlessly—preserving energy and minimizing strain.

The result: improved safety, reduced fatigue, and better outcomes in the field.

SUPPORT TECHNICIAN LONGEVITY

Repetitive climbing puts long-term stress on muscles and joints. The VAS reduces physical wear and tear on technicians—helping extend their careers, improve retention, and reduce injury-related downtime.

MORE TIME IN THE NACELLE

Faster vertical transport means more time on task. By eliminating fatigue from the climb, the VAS supports greater technician productivity and higher overall turbine uptime.

RETROFIT-FRIENDLY INSTALLATION

VAS is designed for fast, non-invasive installation.

It mounts directly to the existing tower ladder—requiring no structural modifications. Typical installs take less than 8 hours, minimizing disruption to site operations.

BUILT ON DECADES OF EXPERIENCE

Sky Climber Renewables delivers the VAS backed by more than 70 years of access expertise. The design builds on decades of innovation in engineered hoists, platforms, and rigging—refined with real field service insights that shape every detail of the system.

Independent Fall Protection System

The Vertical Assist System from Sky Climber Renewables features a dual fall protection design—supporting both the technician's personal fall arrest system (PFAS) and an integrated platform safety mechanism.

This layered safety model offers redundancy, increasing peace of mind and ensuring compliance with industry standards.

A. OPERATOR'S PERSONAL FALL ARREST SYSTEM

Technicians remain safely tethered using their standard climbing PPE.

B. VAS PLATFORM FALL ARREST DEVICE

The VAS includes a built-in, automatic fall protection unit connected to the platform—preventing uncontrolled descent and protecting the technician and equipment in any scenario.

VERTICAL ASSIST SYSTEM SPECIFICATIONS TABLE

Construction	Aluminum, powder-coated steel
Rated Load Personnel	up to 140 kg (310 lbs)
Rated Load Freight	up to 25kg (55 lbs)
Speed	18 meters per minute (59 ft/min)
Control System	Frequency-conversion, programmable logic control (PLC)
Power Supply	Single/3 Phase, 220V AC, 50/60 Hz (400V optional)
Unit Dimensions	468 mm (W) × 431 mm (D) × 1410 mm (H)
Certifications	UL, ANSI Z359.16 and OSHA Compliant

Maximize Uptime & Technician Efficiency

Optimize Tower Operations with Precision Controls and Built-in Redundancies

CONTROL MODES

The Vertical Assist System (VAS) can be operated directly from the rider interface, via remote control, or through a down-tower control cabinet. Priority is always given to the operator in the unit.

REDUNDANT LOCK-OUT PROTOCOL

Built-in logic ensures the rider's control always overrides remote commands—adding a layer of safety and preventing unintended movement.

SMOOTH ASCENT CONTROL

A variable frequency drive adjusts power and speed dynamically for a consistent and stable ride—regardless of conditions.

OBSTRUCTION DETECTION

An integrated sensor halts ascent immediately if the system detects platform interference, blocked hatches, or other obstructions.

LOAD MONITORING

If system load exceeds 140 kg (310 lbs) during ascent, an alert is triggered and movement is restricted. Freight mode is limited to 25 kg (55 lbs). The system will not start if the load exceeds these limits or if no load is present, and will stop automatically if the load is removed during operation.

PLATFORM PROXIMITY ALERT

When nearing platform height, the system slows and triggers an audible signal—helping prevent unintended contact with maintenance decks or service tools.

LADDER-INTEGRATED GUIDE TRACK

The VAS operates on a ladder-mounted guide rail, reinforcing system stability and enhancing fall protection performance. ANSI-compliant rail and integrated PFAS, compatible with a range of PFAS devices (e.g., 3S, Skylotec and others).

EMERGENCY CLIMB-OVER STEP

An integrated evacuation rung allows the rider to climb above the VAS in case of power loss or obstruction.

EMERGENCY STOP FUNCTION

Each control station—on-car, remote, and ground—features an independent E-Stop button for immediate system shutdown.

PRECISION TRACTION SYSTEM

The VAS uses a high-torque traction motor with advanced rope slip detection and automatic brake engagement.

FAST TENSION CALIBRATION

The base includes a quick-tension adjustment device for simple, field-ready wire rope retensioning.

UNIVERSAL BATTERY COMPATIBILITY

The VAS lift car's onboard battery powers sensors and communication with the system, and can operate with widely available tool batteries—such as Milwaukee®—for convenience and minimal downtime.

PATENTED PFAS DETECTION

Integrated patented technology requires the user's personal fall arrest system (PFAS) device to be within proximity of the rail before the lift will operate, ensuring proper safety equipment is in use at all times.

POSITIVE HANDLE CONTROL

A unique control design requires dynamic trigger engagement throughout travel, preventing override and ensuring the operator remains in full control for the entire ride.

DEDICATED LIFT BAG ATTACHMENTS

Integrated load-rated connection points allow secure attachment of closed-top lift bags, making it easy to transport tools and equipment safely during operation.

TOP SHEAVE

Compact and rugged, the top sheave ensures full vertical travel to the uppermost landing platform. Designed for long-term durability in harsh turbine environments.

REMOTE CONTROL

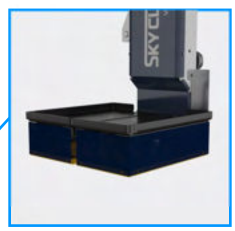
Enables ground or platform-based calling of the unit. Technicians can retrieve the car remotely or send tools between levels—boosting operational efficiency.

DUAL-HANDLE START SYSTEM

Redundant control switches must be engaged simultaneously to activate the lift. If either is released, movement halts immediately for operator protection.

COLLAPSIBLE FOOTBOARDS

In the event of power loss or emergency, the footboards fold up to allow the technician to safely evacuate upward through the ladder space.



BOTTOM COLLISION PANEL

A pressure-sensitive plate stops the lift on contact with any obstacle, preventing unintended collisions with people, platforms, or objects

TOOL CARRIER

Custom-designed tool carrying system secures to the footboard. Allows transport of tools or parts up and down the tower via remote command.

CONTROL CABINET

Located at the base of the tower. Provides power and alternate control functionality. Includes safety lockout and emergency stop capability.

AUTO HATCH OPENER (OPTIONAL)

Available upgrade automates hatch opening and closing as the lift moves between platforms—eliminating manual effort and improving safety.

Auto Hatch Opener

Smart Platform Integration for Safer, Hands-Free Operation

The Auto Hatch Opener (AHO) from Sky Climber Renewables streamlines platform transitions by automatically opening and closing platform hatches as technicians move through the tower.

Manual hatch operation can create serious safety risks—from dropped tools and unsecured openings to work-limiting injuries. The Auto Hatch Opener helps eliminate these risks by ensuring consistent, automated function with every ascent and descent.

By reducing unnecessary contact with platform hatches, the AHO protects technicians and enhances operational efficiency. It also frees technicians to stay focused on the task at hand, not the hatch above or below them.

AUTO HATCH OPENER SPECIFICATIONS TABLE	
Model	SC-AHO
Operation Temperature	-40°C to 60°C
Anti-Corrosion Grade	C4
Rated Voltage	Single phase, AC 230 V ±10%, 50 / 60 Hz
Power	60 W
Protection Class	IP 44 (optional upgrades available)
Weight	11kg
Drive Unit Dimensions	131 × 174 × 314 mm
Crank Arm Length	400 mm

SC-AHO

Side-Opening Model

ADAPTABLE TO MOST HATCHES

The AHO system is engineered for compatibility with a wide range of hatch and platform types—no major structural changes required. Customized solutions are also available to meet unique site or application needs.

COMPACT DESIGN

The AHO's low-profile housing ensures full access to the platform. Technicians can work comfortably without obstruction.

ROBUST TEMPERATURE RESISTANCE

Performs reliably in environments from -40°C to 60°C, making it suitable for even the harshest turbine locations.

DURABILITY

Built with industrial-grade components, the AHO offers a service life of over 25 years in typical operating conditions.

EASY INSTALLATION

Lightweight and modular, the AHO installs using just a few mounting screws—minimizing downtime during retrofit.

MAINTENANCE-FREE

Designed for simplicity, the AHO requires no scheduled maintenance.

Elevating Access. Enhancing Safety. Extending Technician Careers.

Sky Climber Renewables applies the practical insight of a service provider for wind turbines with over 70 years of access engineering expertise. The Vertical Assist System and Auto Hatch Opener are engineered to streamline technician movement, minimize physical strain, and increase efficiency in turbine maintenance.

(U.S. Patent No. 12460432, and patents pending)

Sky Climber Renewables

1800 Pittsburgh Drive
Delaware, OH 43015 USA
+1 888.559.7297
contact@skyclimber-re.com
www.skyclimber-re.com

UL Certified. ANSI Tested. The Vertical Assist System from Sky Climber Renewables is certified by UL Solutions, with representative samples evaluated and found to meet applicable safety standards. The system has also been tested in accordance with ANSI Z359.16-2016 Qualification Testing, ensuring compliance with recognized fall protection and vertical access requirements.

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