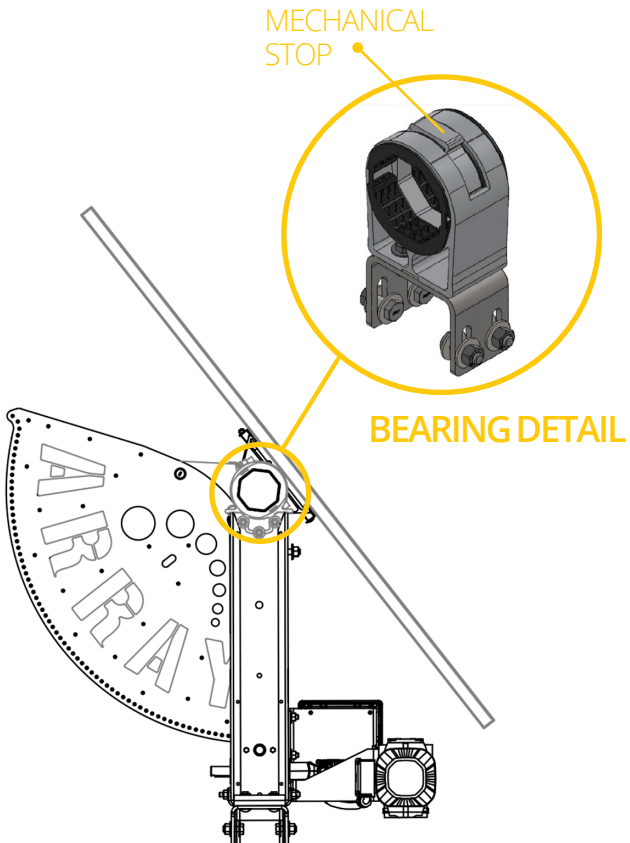
ARRAY TECHNOLOGIES

DuraTrack HZ v3® WIND MANAGEMENT SYSTEM

THE ARRAY TECHNOLOGIES DURATRACK HZ V3 WIND MANAGEMENT SYSTEM FEATURES PASSIVE WIND MANAGEMENT, WHICH DOES NOT REQUIRE ACTIVE WIND STOW OR AN UNINTERRUPTED POWER SOURCE (UPS).

The DuraTrack HZ v3 single axis solar tracker was designed for scenarios of wind abatement without power. The system's passive mechanical wind protection system, also called "failure free wind design," does not require power to operate and protects the tracker during high-wind events regardless of power to the motors. That is by design, as the power can fail during storms or not be in place during construction.

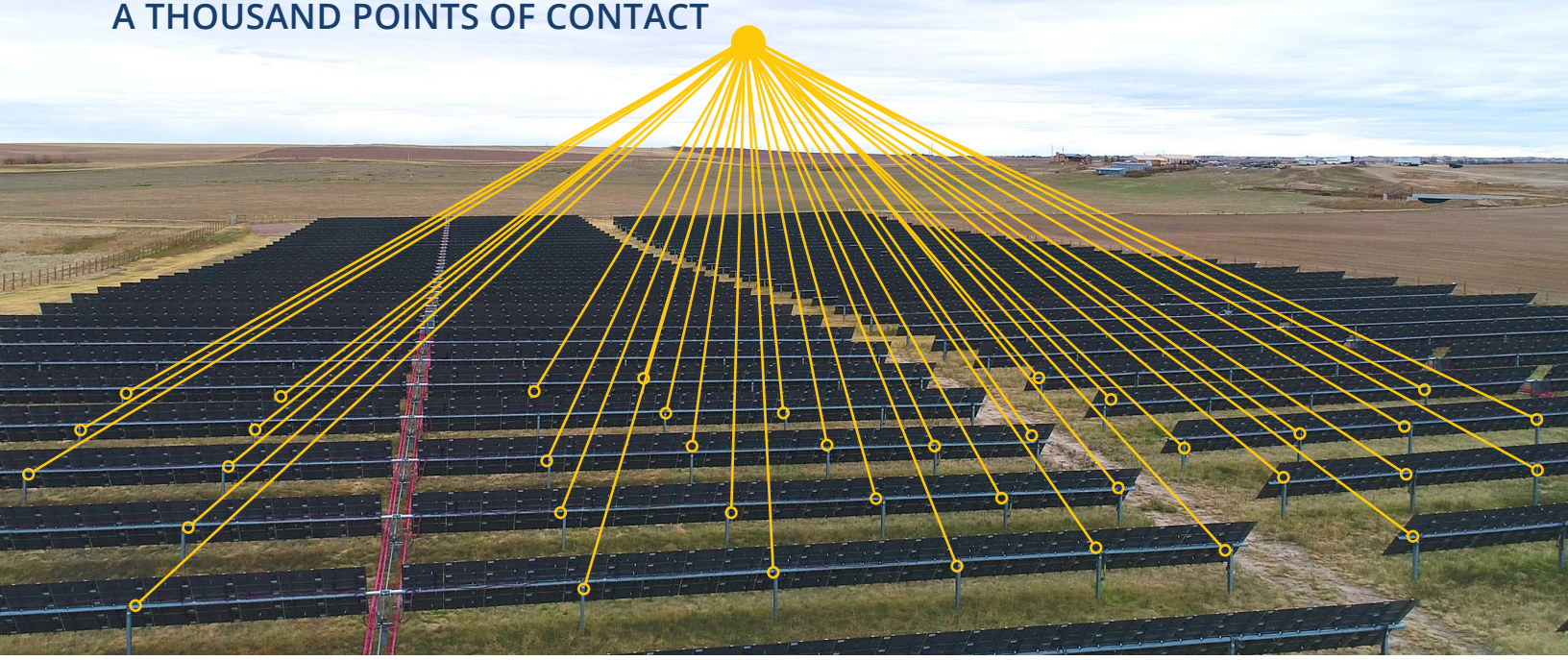
The DuraTrack HZ v3's drivetrain is sealed and lubricated for life, and is the only system on the market with a wind abatement strategy that is mechanical and does not require power or electronics to ensure safe and reliable operation in wind events.



> *We've never relied on stow for our systems; we design for no stow. Wind forces on a tracker at a zero degree position still can have a significant load on the array and near¬peak torque on the system. With our new V3 design, we have come up with a passive stow design and added a torsion limiting device that allows it to move to a position where there is less torsion on the array.*
>
> **JOHN WILLIAMSON**
> *Lead Designer, Array Technologies*

The Array passive wind system allows the tracker row to rotate to the position of least resistance in heavy wind. Once it reaches maximum tilt, the system is now in its strongest structural position. The system utilizes the full mechanical stop that is located on every single bearing post. These mechanical stops resist and spread the wind forces to every single bearing post instead of allowing those forces to transmit to the center gear, like other trackers allow. Thus, the DuraTrack system rotates to the resistance of

PROTECTING YOUR ARRAY FROM A THOUSAND POINTS OF CONTACT



the 22 ft/lbs on the torque limiting clutch at each gear as the wind moves the row independently to the position of least resistance until it reaches maximum tilt. At maximum tilt, Duratrack V3 is now experiencing the load at every bearing post, with no more than 10 modules of force applied to any single post, protecting the gear. Because each row is also independently clutched, it allows the rows to turn to their individual position of least resistance. Array Technologies has found—as the only tracking company on the market to test their system on a full scale model, with turntable at Langley Airforce Base in a seven-story tall wind tunnel—that stowing all the rows in the same position actually creates harmonics and can lead to even greater damages. The passive system independent to each row also avoids these wind harmonics and torsional galloping. Finally, when power is available to the site, the system re-calibrates every morning and every evening (twice per day) to ensure all rows are synchronized after a wind event.

The wind management system has proven itself over multiple hurricane seasons. The latest release from Array Technologies about the effectiveness of the passive wind system during the 2018 hurricane system details how hundreds of megawatts of Array trackers were unscathed.

Learn more about the Array Technologies DuraTrack HZ v3 system at www.rpcs.com.

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