



soltec

**MAKING TRACKS FOR A
BRIGHTER FUTURE**

INTEGRATED PLAYER ALL-IN-ONE

About us

Soltec is a Vertically Integrated PV company specialized in the manufacture and supply of single-axis solar trackers with global operations and a workforce of over **1200** people, blending experience with innovation, with already **146** active patents.

20.1+
GW

Projects Worldwide

93+ Soltec
GW Pipeline

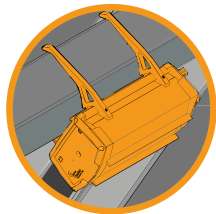
14+ Development
GW Pipeline

Innovation

BEST IN CLASS PRODUCTS AND DIFFERENTIATED SOLUTIONS

Implementing all the products and processes to each project through its R&D team thought its dedicated Patent Box:

Soltec Innovations, with
146 Active Patents



Full Wireless



Dy-WIND



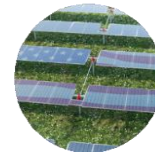
10K5
2007



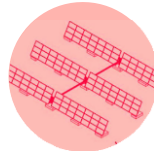
SF7 Bifacial
2018



SF7 USA
2023



SFONE USA
2024



SA Series
2010



SF7 Tandem
2020



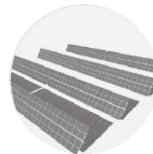
Solarfighter (Gen 1)
2011



SF8
2020



SF Utility
2013



Solarfighter (Gen 2-DG)
2021



SF7
2017



SF ONE
2021



Our Trackers

SF7 – 2P Tracker

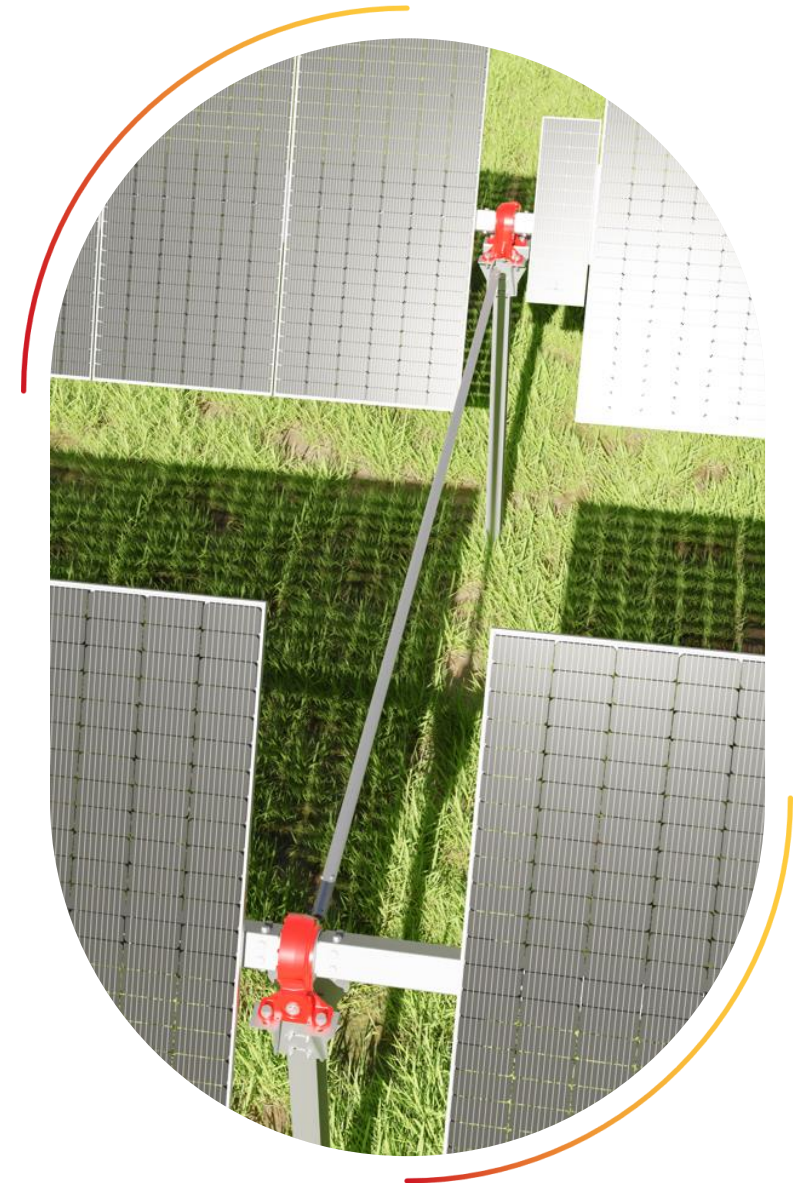
- **Independent-row** for less land and more access
- High slope limitations, **17% NS** and **unlimited EW** (higher than 10% the tracker becomes an exterior tracker)
- Clearance and pile reveal tolerance can be customized
- Better bifacial adaptation
- **Compatible with CAB System** or Wire messenger
- Self powered/grid powered availability
- **Full-Wireless** mesh network reduces communication failure of trackers
- **TeamTrack®** Backtracking enabled



Our Trackers

SFONE – 1P Tracker

- **Dual-row** tracker for less components and lower cost
- 6 strings per motor and control box
- High slope limitations, **15% NS** and **unlimited EW** (higher than 5% the tracker becomes an exterior independent tracker)
- Clearance and pile reveal tolerance customizable
- **Compatible with CAB System** or Wire messenger
- Self powered/grid powered availability
- **Full-Wireless** mesh network reduces communication failure of trackers
- **TeamTrack®** Backtracking enabled

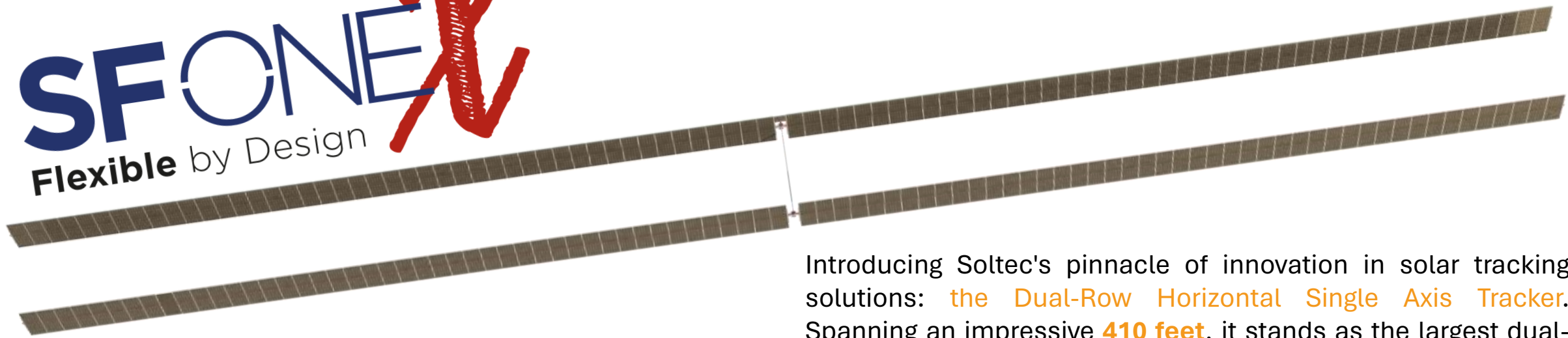
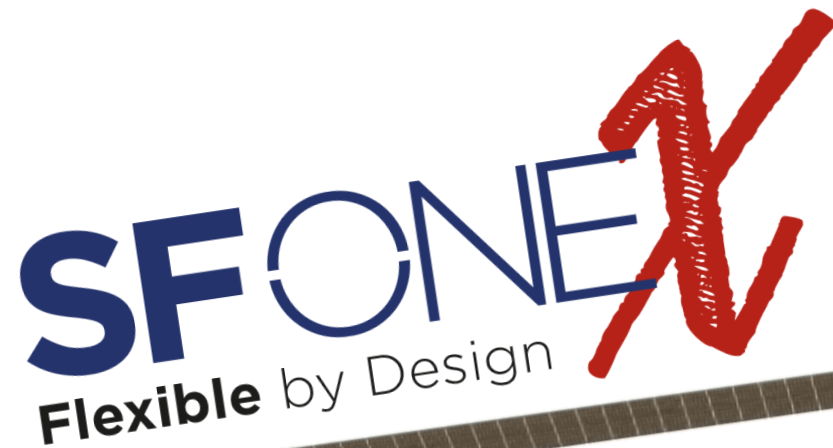




SFONEK

Flexible by Design





Dual-row Horizontal Single Axis Tracker

- Up to **410'**, the largest dual-row system from Soltec
- Self-powered with dedicated panel for greater reliability
- Full-wireless communication for secure and stable connection
- Dual-row linked by **rotary flex shaft**
- Cost-effective solution: half as many motors and tracker controllers

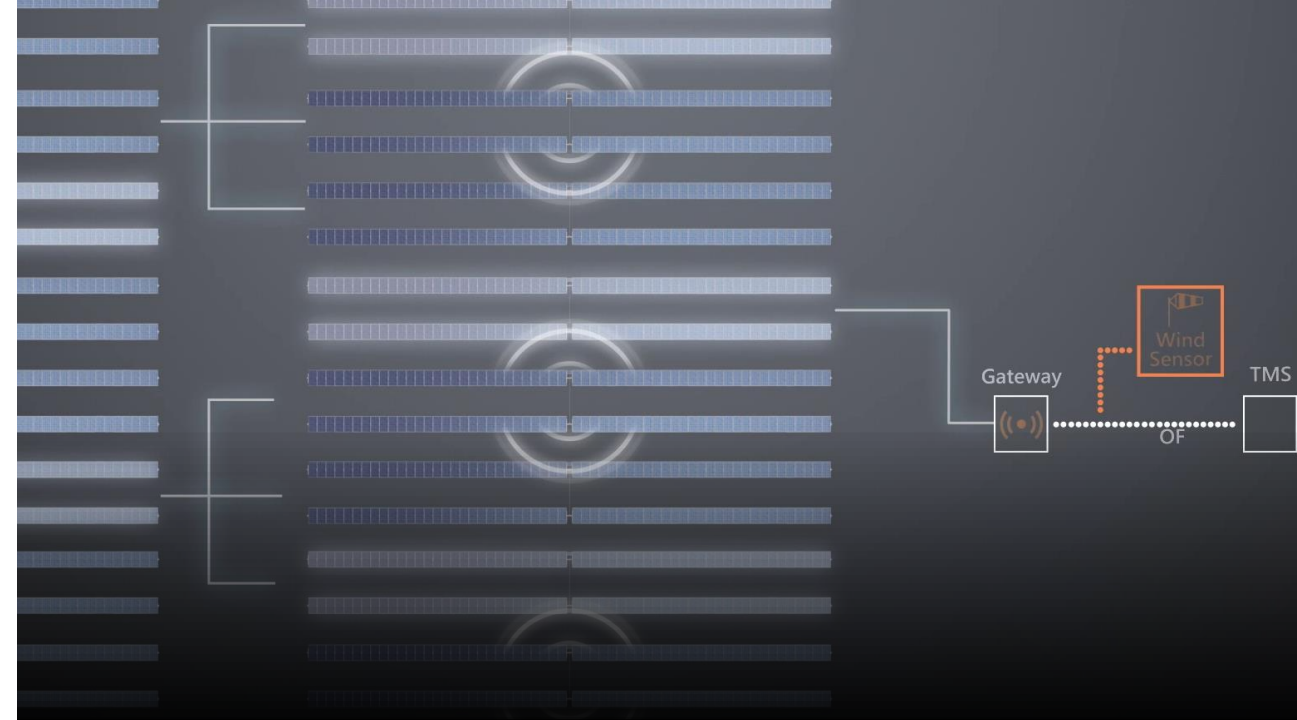
Introducing Soltec's pinnacle of innovation in solar tracking solutions: **the Dual-Row Horizontal Single Axis Tracker**. Spanning an impressive **410 feet**, it stands as the largest dual-row system in our portfolio, engineered for unmatched reliability with a dedicated solar panel powering each unit. Experience seamless, full-wireless communication that ensures a secure and stable connection, paramount in modern solar operations.

The **unique design** featuring dual rows connected by a rotary flex shaft provides a cost-effective solution, effectively reducing the number of motors and tracker controllers by half. This strategic design choice not only lowers initial investment but also streamlines long-term maintenance, solidifying our tracker as the smart choice for your solar array needs.

Smart Power

Introducing **our smart solar tracking solution**, designed for resilience and performance. Our self-powered system, equipped with a dedicated panel and a long-life battery, ensures up to four days of autonomous operation without sunlight.

Experience the **most reliable full wireless communication**, optimized for the best bandwidth data transfer. Advanced algorithms are at the heart of our system, enhancing energy production and mitigating risks, paving the way for a future where solar efficiency and intelligence converge.



Smart power benefits

- Self-powered system with dedicated panel
- Long-life battery: up to 4 days with no sunlight
- The steadiest full wireless communication system
- The optimal bandwidth data
- Advanced algorithms to maximize energy production and reduce risks
- TeamTrack equipped to enhance solar plant efficiency

Our Technologies

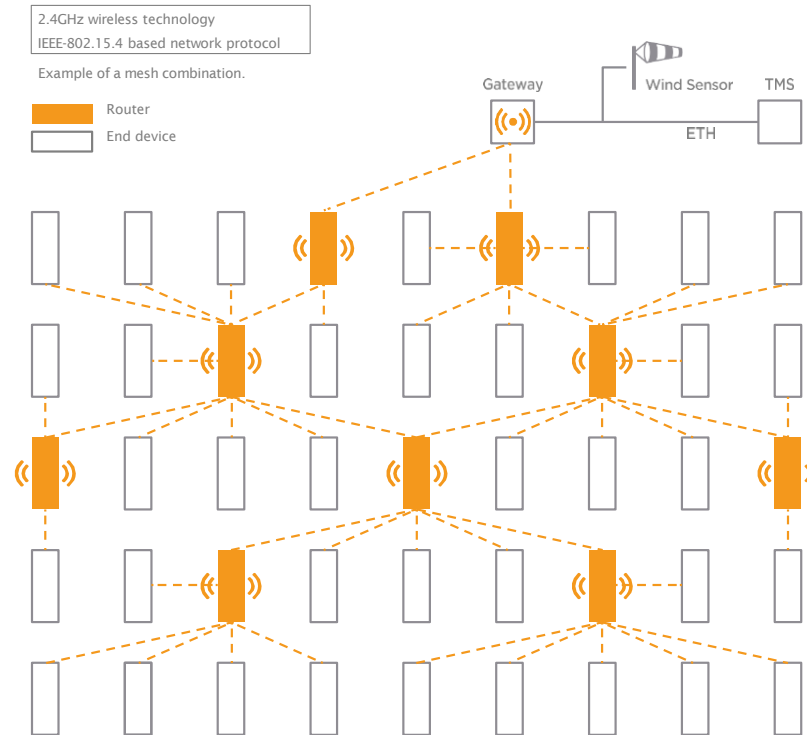
Tracker Control System

FULL WIRELESS

All necessary elements integrated for optimal performance and movement of each solar Tracker, achieving the best module angle towards the Sun.

SMARTER

- Open Thread **Full Wireless** system
- Unique **Internet of Things**
- **SPD** protection
- **TMS** Monitoring System
- **Distributed Control**
- **Self-Commissioning**



Our Tech – Asset Protection

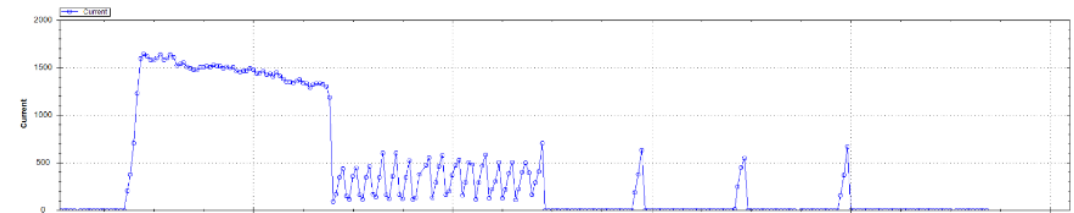
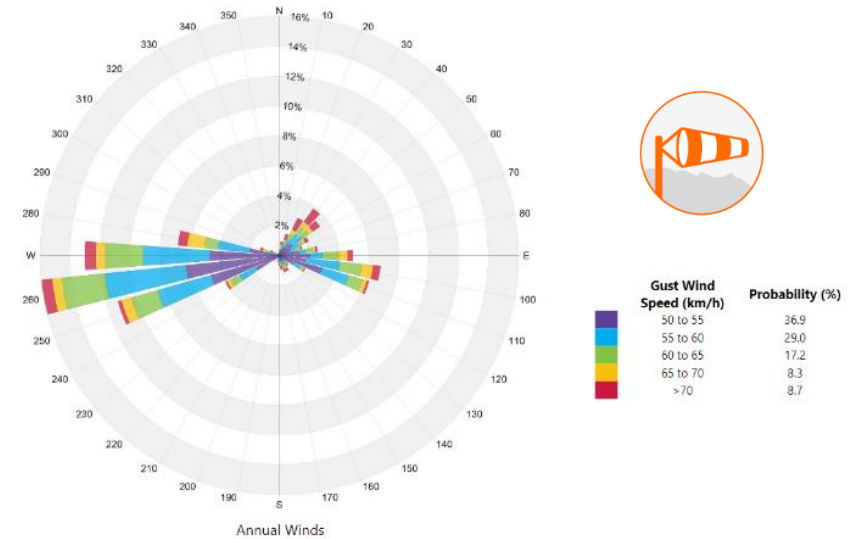
Safety Algorithms

- **Weather algorithms**

- Wind with several perimetral anemometers
- Snow
- Flood sensor
- Hail sensor

- **Electronic alerts**

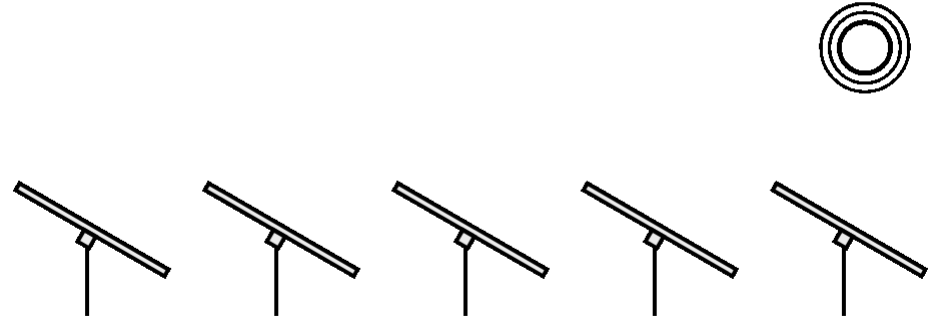
- STOP button activation
- Communication failure
- Low battery
- Motor overcurrent
- Motor undervoltage



Dy-Wind

State-of-the-art weather defense

- **Dy-wind**: Unique methodology wind study
- **Hail** algorithm defense



Soltec introduces Dy-WIND, the pinnacle in solar tracker design technology, ensuring wind is never a concern. Developed in collaboration with industry leaders RWDI and CPP WIND, this technology not only withstands wind but also features an intelligent self-stow system that automatically adjusts to the safest position during high wind events.

Moreover, Soltec's innovative Hail Algorithm dramatically reduces the risk of hail damage, which can lead to significant module replacement costs and loss of power plant production. This advanced system employs early detection through sensor-equipped stow systems and a rapid response mechanism, positioning trackers optimally to minimize impact.

Asset Protection

Hail Algorithm

Soltec's hail algorithm aims to reduce module exposure to hail impacts with a **quick activation mechanism** which send the tracker to its maximum tracking angle protecting both side of the module. In the event of a hailstorm, photovoltaic modules in their hail stow position have a **lower exposed surface** area than modules not moved to a specific stow position. In this case, even if hailstone impacts occurred, the energy to be dissipated would be minimal.

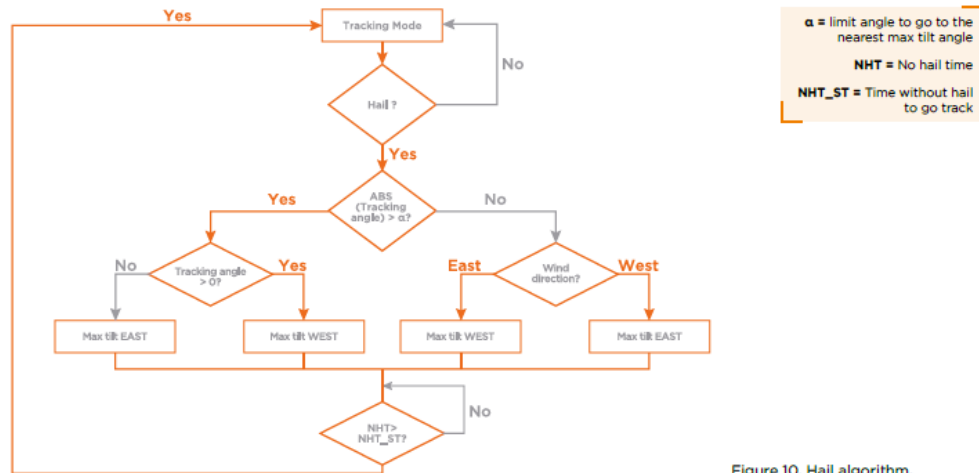
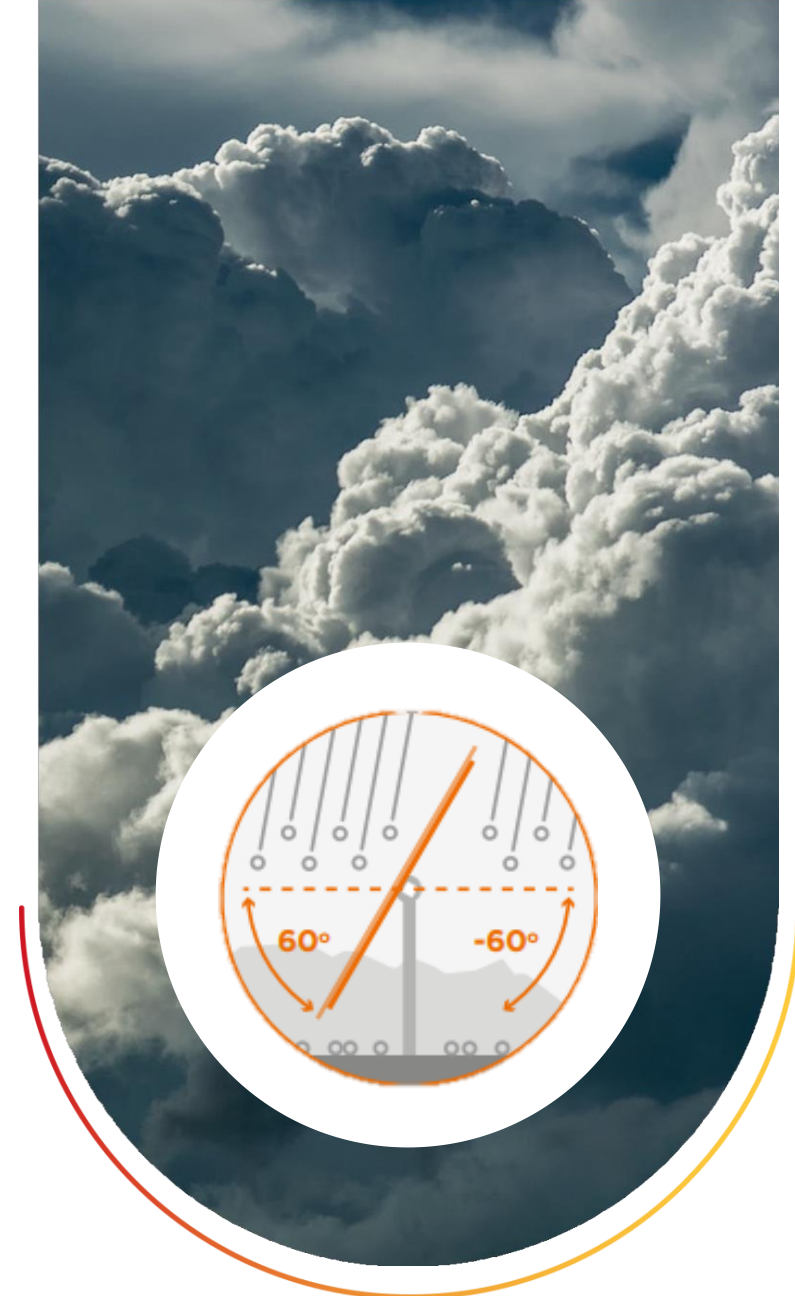


Figure 10. Hail algorithm.

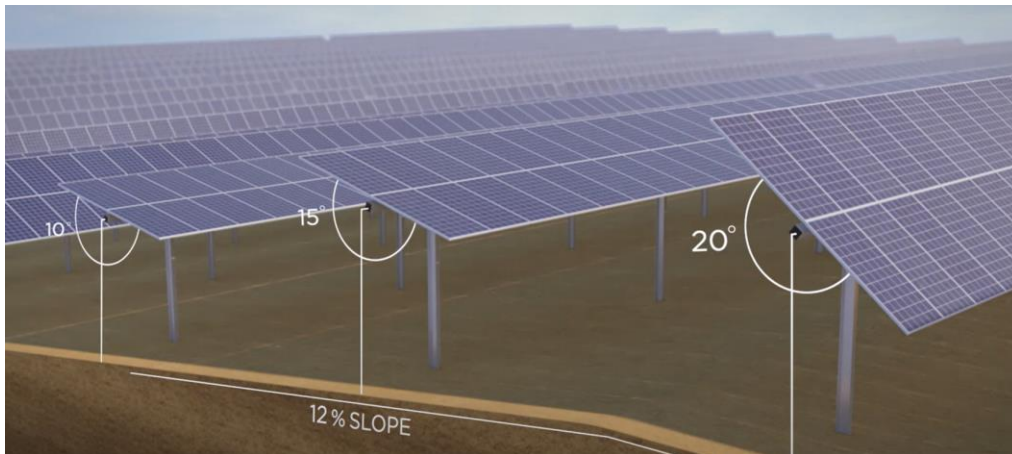


Weather
Defense

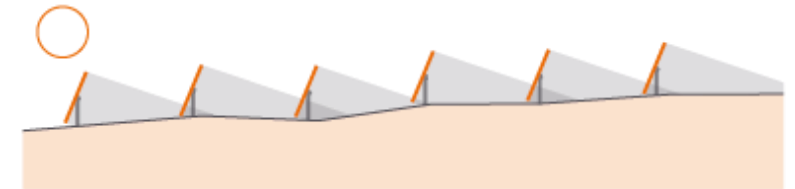
Smart Tracking - TeamTrack™

Asymmetric Backtracking. Tracker Position Control.

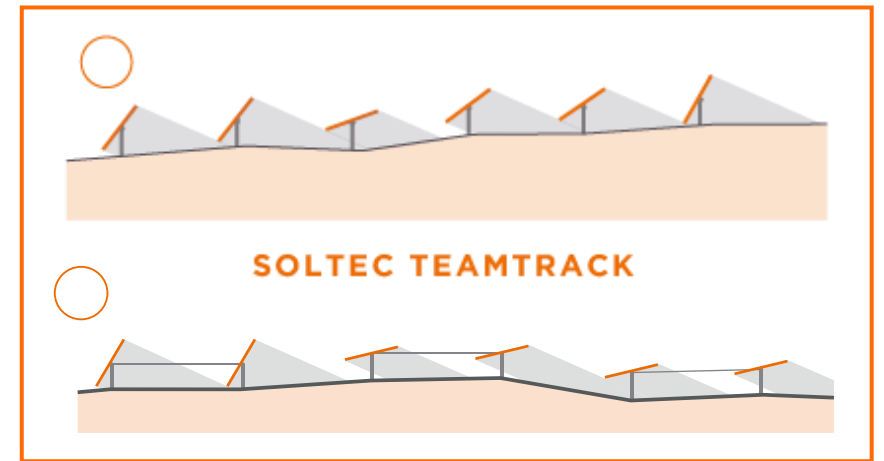
- TeamTrack™ is part of comprehensive Soltec tracker position control that **avoids inter-row shading** in the early and late-day hours due to terrain undulations.
- TeamTrack achieves up to **6.2% yield-gain** over standard tracking.
 - Tracker Control with no blind spots
 - Yield-gain 3D modelling (various angle combinations)
 - Algorithm included in SF7 and Sfone trackers



*Soltec's TeamTrack™ Algorithms were validated by TÜV Rheinland®



STANDARD TRACKING

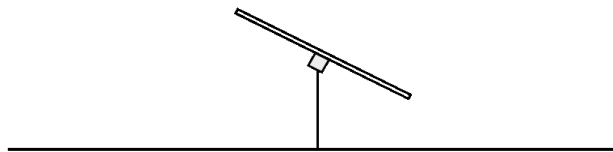


SOLTEC TEAMTRACK

Our Tech – Energy Boost

Diffuse Booster

Diffuse Booster is one of the algorithms that make up the Soltec Team Track® extended package, increasing energy yield by **5.34%** and **6.85%**, depending on the latitude, during its activation time at Mediterranean and Equatorial sites under cloudy events.



5.34%

Yield Gain

The Ultimate Slope-Adaptive Solar Solution

Soltec's Dual-Row Horizontal Single Axis Tracker is revolutionizing the solar industry with its versatile land-use capabilities. Our all-terrain design features minimizes civil works, allowing for installation on a variety of landscapes. Tailored to conform to the natural contours of the terrain, our tracker seamlessly adapts to both 15% North-South and East-West slopes, ensuring maximum land utilization. The optimized design further simplifies the installation process through direct piling, facilitating a quicker setup and reducing environmental impact. This strategic innovation not only expands the potential sites for deployment but also enhances the overall efficiency and sustainability of solar energy projects.



Greater land-use options

- All-terrain design: reduced civil works
- Adapted to the landscape
- 15% N-S slope
- 15% E-W slope
- Optimized design by direct piling

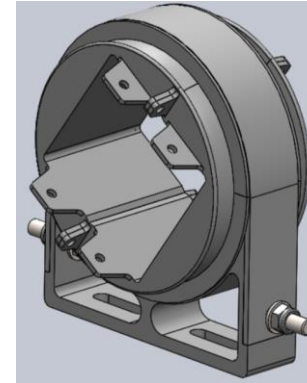
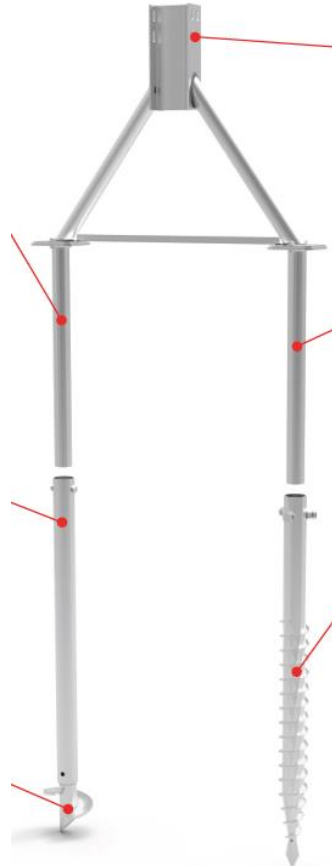
Compatibility Alternative Foundations

SFOne

APA
SOLAR RACKING



**A-FRAME
TRACKER
FOUNDATION**



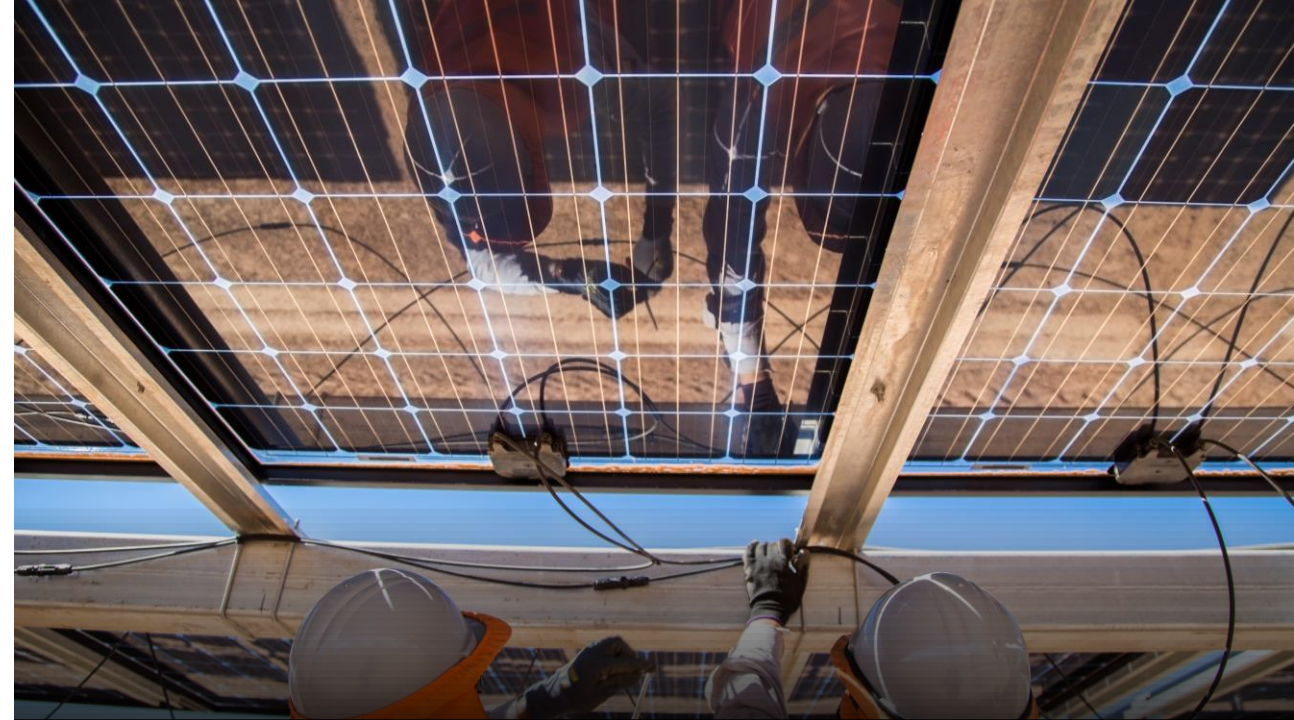
Cost-Effective Installation and Operation

Discover unparalleled economic efficiency with our cutting-edge solar tracking technology. Our system is **meticulously designed for cost-effective installation and operation**, featuring a reduced number of piles for a swift and streamlined assembly process.

We offer an expansive range of assembly and installation tolerances to accommodate various site conditions, alongside **pre-assembled sets that significantly diminish onsite labor demands**.

Operational and maintenance expenses are markedly decreased due to the utilization of fewer, yet optimized parts, ensuring a reliable and long-lasting solar infrastructure. The standardization of components is a key factor in reducing assembly times, fostering an efficient construction phase.

Additionally, our **sophisticated Cable Management System (CAB)** further simplifies the operational workflow, underscoring our commitment to operational excellence and cost reduction.



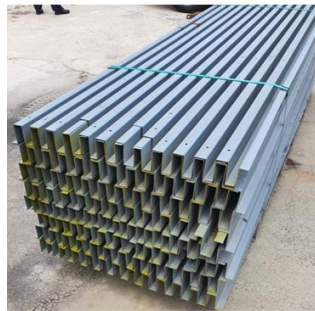
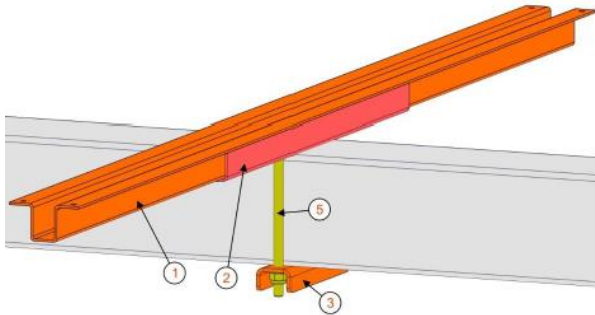
Cost-Effective Installation and Operation

- Reduced number of piles
- Wide range of assembly and installation tolerances
- Pre-assembled sets to reduce onsite labour
- Reduced O&M by using less and optimized parts
- Standardized components to reduce assembly times
- Cable management system (CAB)
- Only standard commercial tools needed

Soltec makes installation easier

Pre-assembled rails

- Soltec Standard: Rails and reinforcement preassembled
- Option to upgrade: Preassembling also U-Bolt, washers and nuts to slide onto the torque tube and into place.



Torque tubes/piles

Color coded tubes and piles depending on profiles

DESCRIPTION	COLOR CODE
TORQUE TUBE 150X150X4 L=10750MM/423IN	ORANGE
TORQUE TUBE 150X150X3 L=8550MM/337IN	BLUE
TORQUE TUBE 150X150X3 L=9650MM/380IN	GREEN
TORQUE TUBE 150X150X3 L=11880MM/468IN	YELLOW
TORQUE TUBE 150X150X3 PG L=10700MM/421IN	SILVER
TORQUE TUBE 150X150X3 L=9700MM/382IN	GREY
TORQUE TUBE 150X150X3.5 PG L=9850MM/388IN	BEIGE
TORQUE TUBE 150X150X3.5 PG L=10750MM/335IN	WHITE
TORQUE TUBE 150X150X3 L=11880MM/468IN	PINK
TORQUE TUBE 150X150X4 L=11850MM/446IN	BLACK
TORQUE TUBE 150X150X3 PG L=10750MM/423IN	BROWN
TORQUE TUBE 150X150X3 PG L=9850MM/388IN	KHAKI
TORQUE TUBE 150X150X3 PG L=11850MM/467IN	RED
TORQUE TUBE 150X150X6 L=11850MM/467IN	NO COLOUR/ HDG



Hardware in buckets

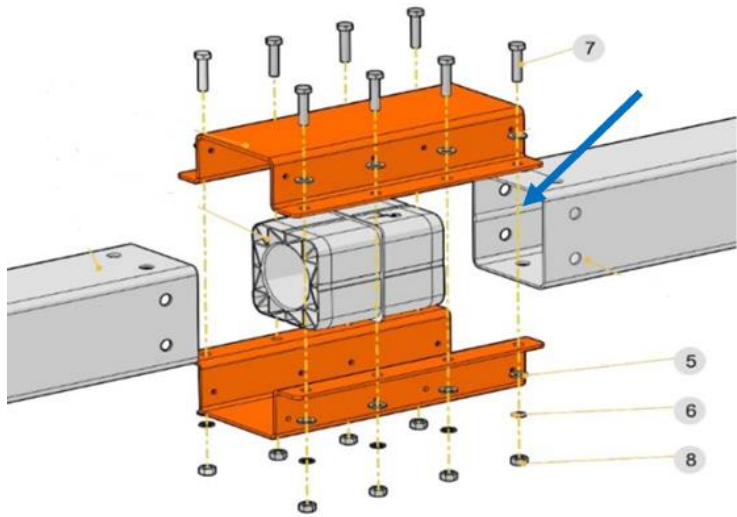
Hardware pre-assembled and in buckets to facilitate installation



Soltec makes installation easier

Coupler Assembly fasteners

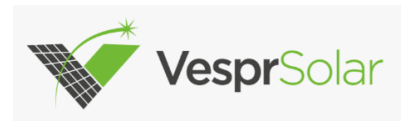
Torque tubes Coupler assembly (for Sf7 and Sfone) used to be bolts + nuts
-> now carriage bolts



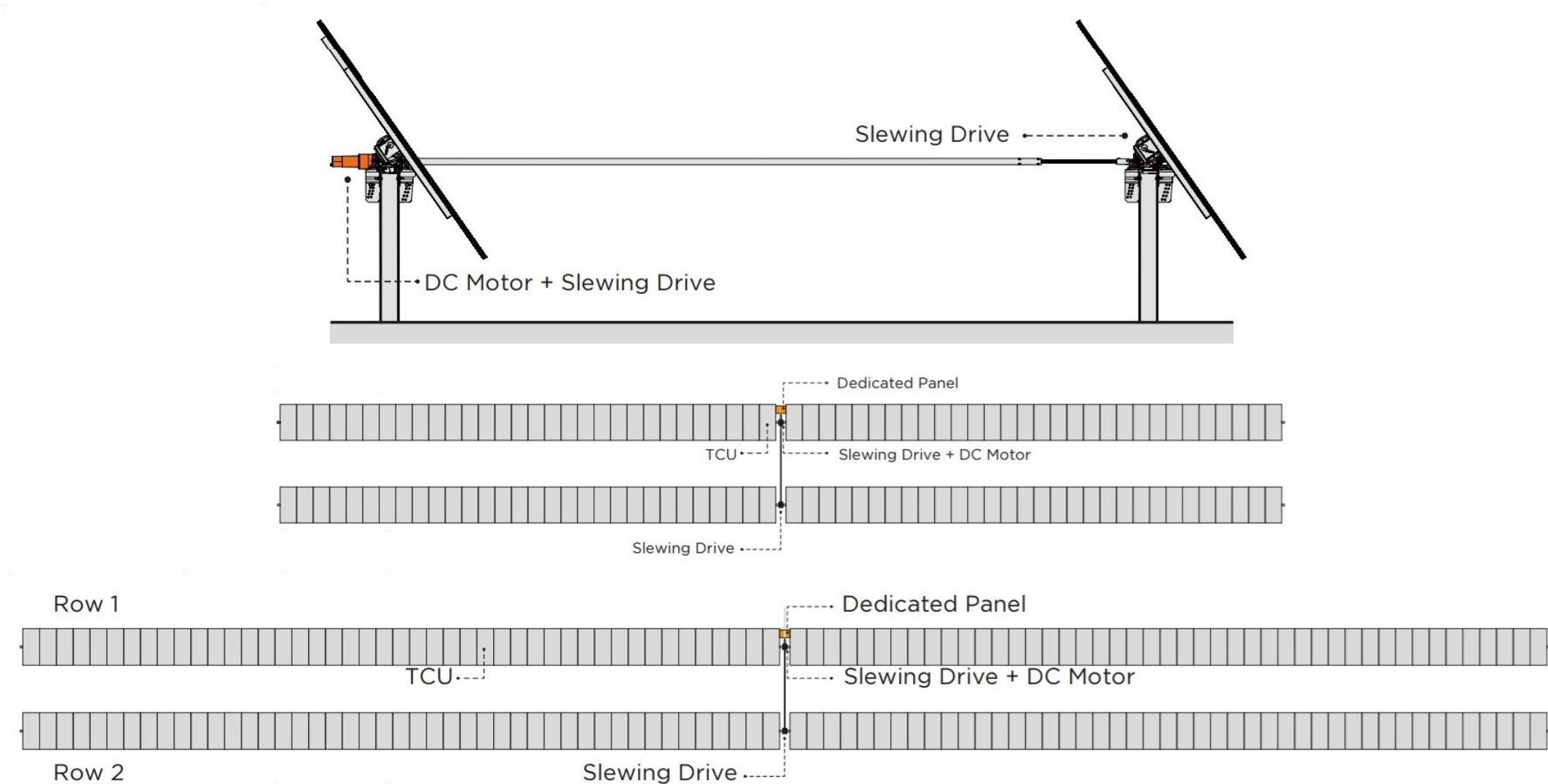
Installation Options

Module fixation options

- Bolts + Washer
- Rivets + Washer
- Bobtails
- Neobolts
- Arraymond Cinch (PowAR Cinch)
 - For First Solar S6 and S7: PowAR Wedge
- Vepsr Solar Clamps



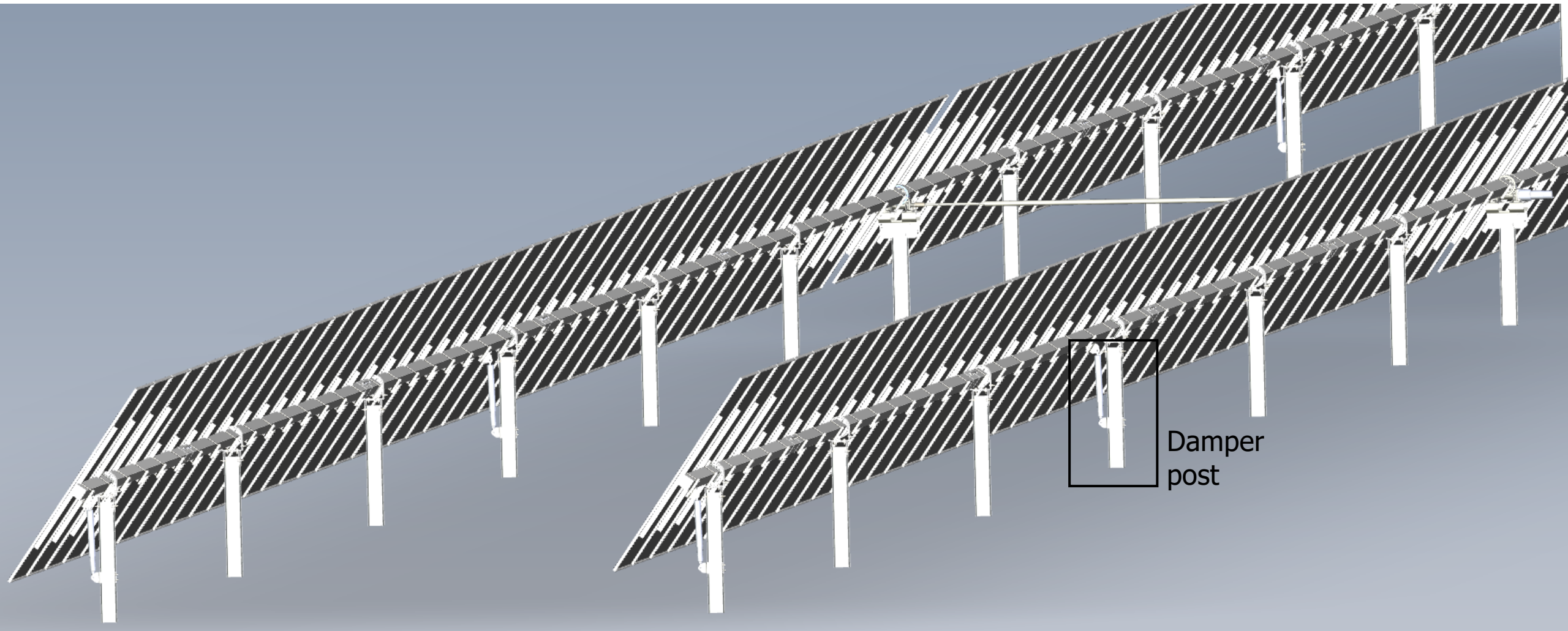
Comparing SFOneX and SFOne



Wind safety considerations

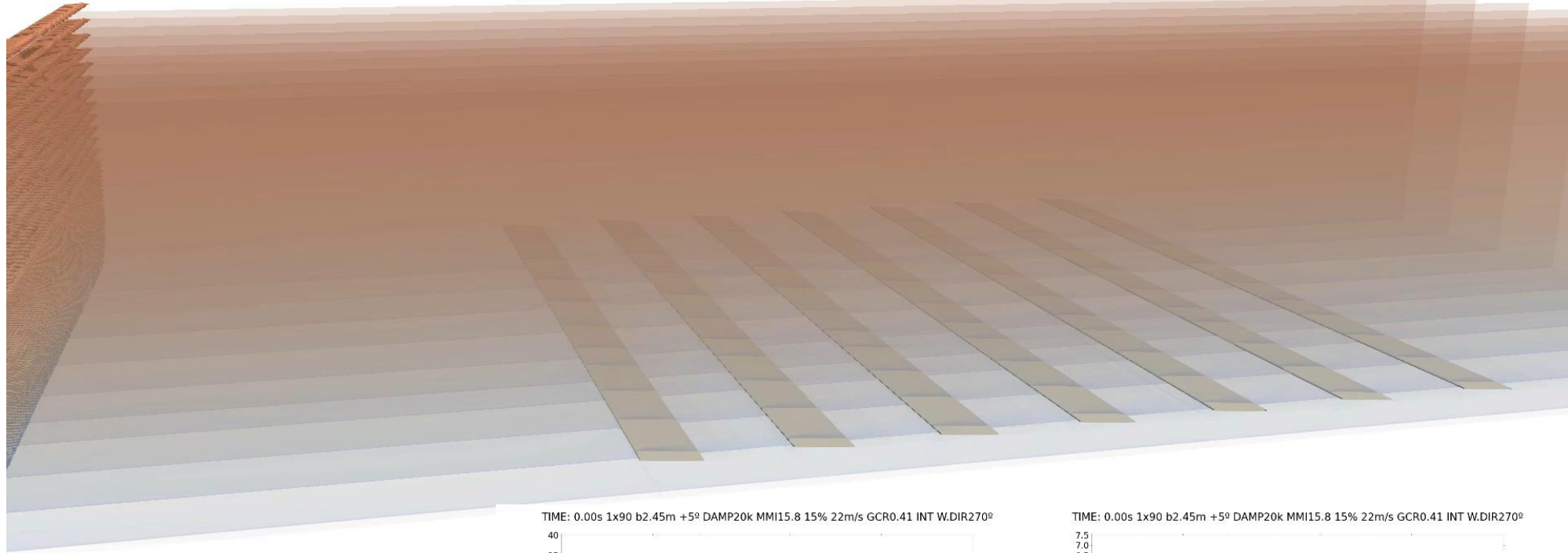
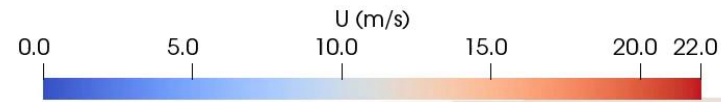
- Powerful tracker control (2x 90x 40 kg = 7.2 tons)
- Fast motor
- Use of robust hydraulic damper (compensate for low stiffness)
- Hard stop at maximum tilt
- Safety margin for structural loads and onset speeds
- Aeroelastic testing in CPP wind tunnel

Tracker with damper locations

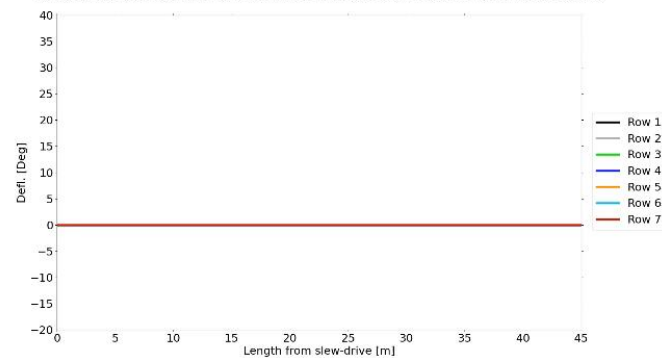


How to choose the damper – too weak

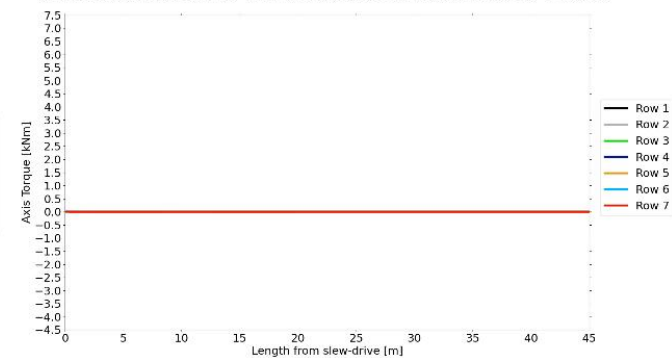
Time: 0.00s



TIME: 0.00s 1x90 b2.45m +5° DAMP20k MMI15.8 15% 22m/s GCR0.41 INT W.DIR270°

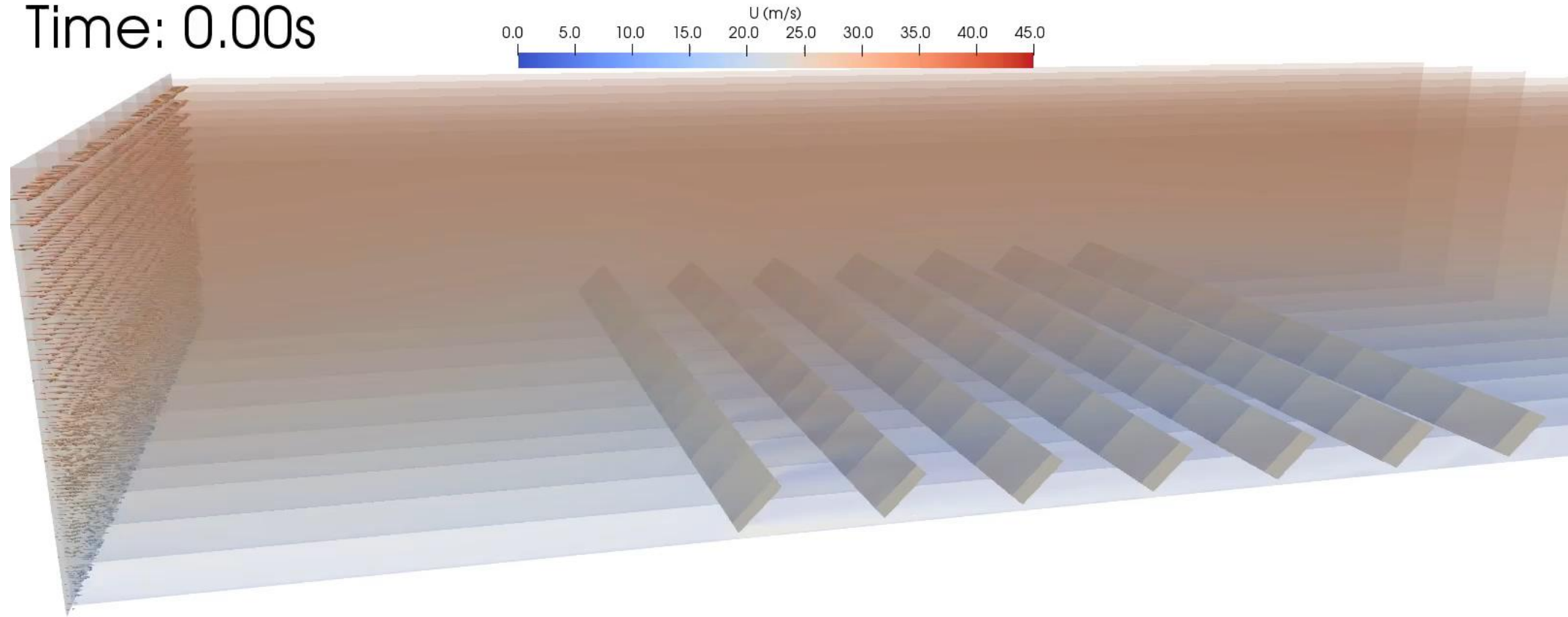


TIME: 0.00s 1x90 b2.45m +5° DAMP20k MMI15.8 15% 22m/s GCR0.41 INT W.DIR270°



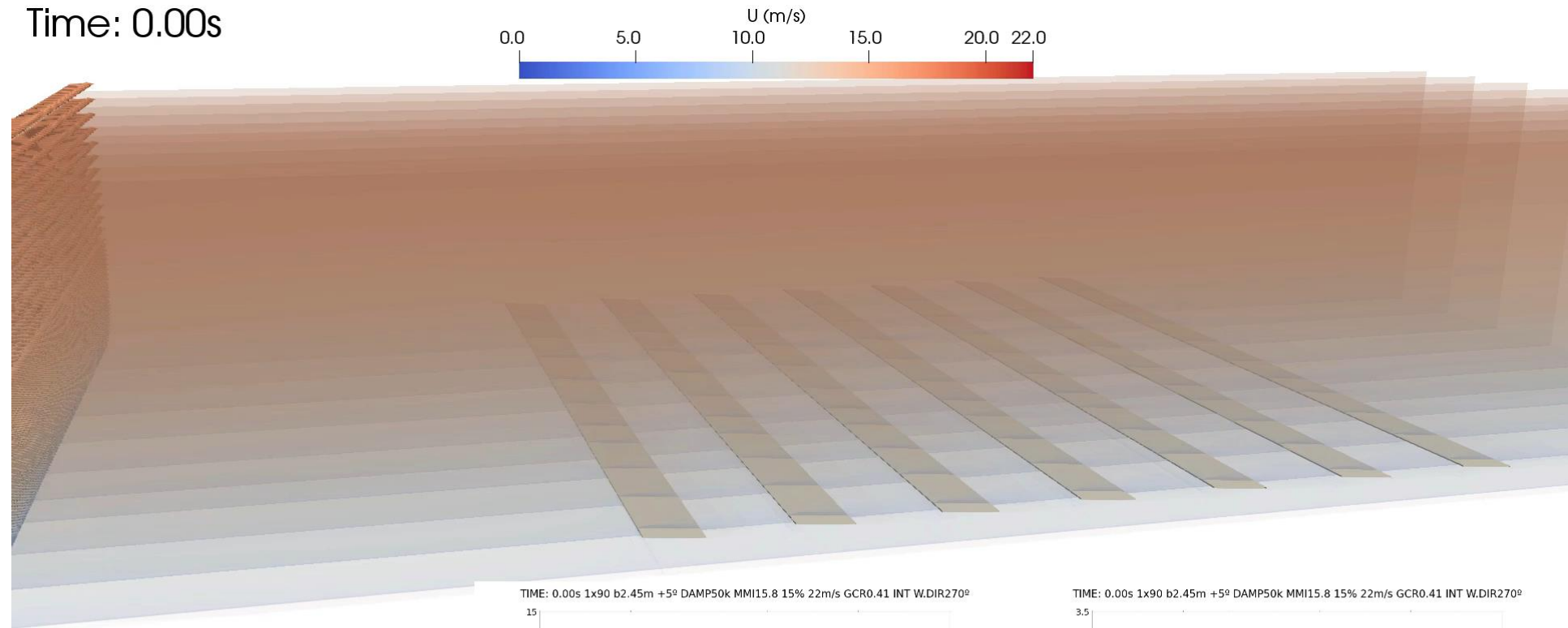
How to chose the damper – too few

Time: 0.00s

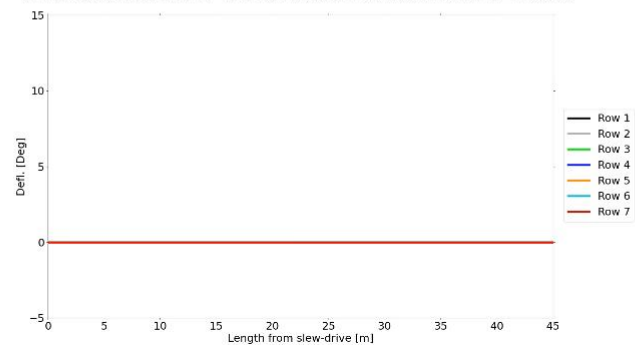


How to choose the damper – perfect fit

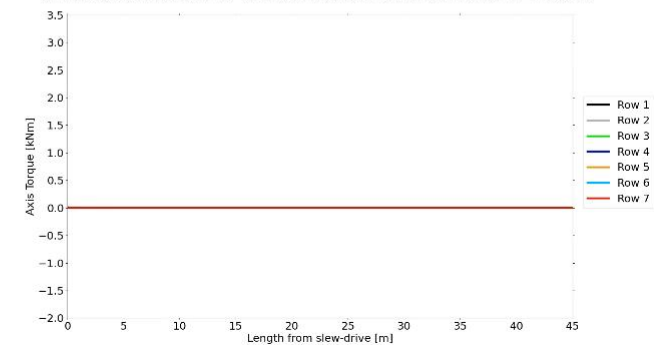
Time: 0.00s



TIME: 0.00s 1x90 b2.45m +5° DAMP50k MMI15.8 15% 22m/s GCR0.41 INT W.DIR270°



TIME: 0.00s 1x90 b2.45m +5° DAMP50k MMI15.8 15% 22m/s GCR0.41 INT W.DIR270°



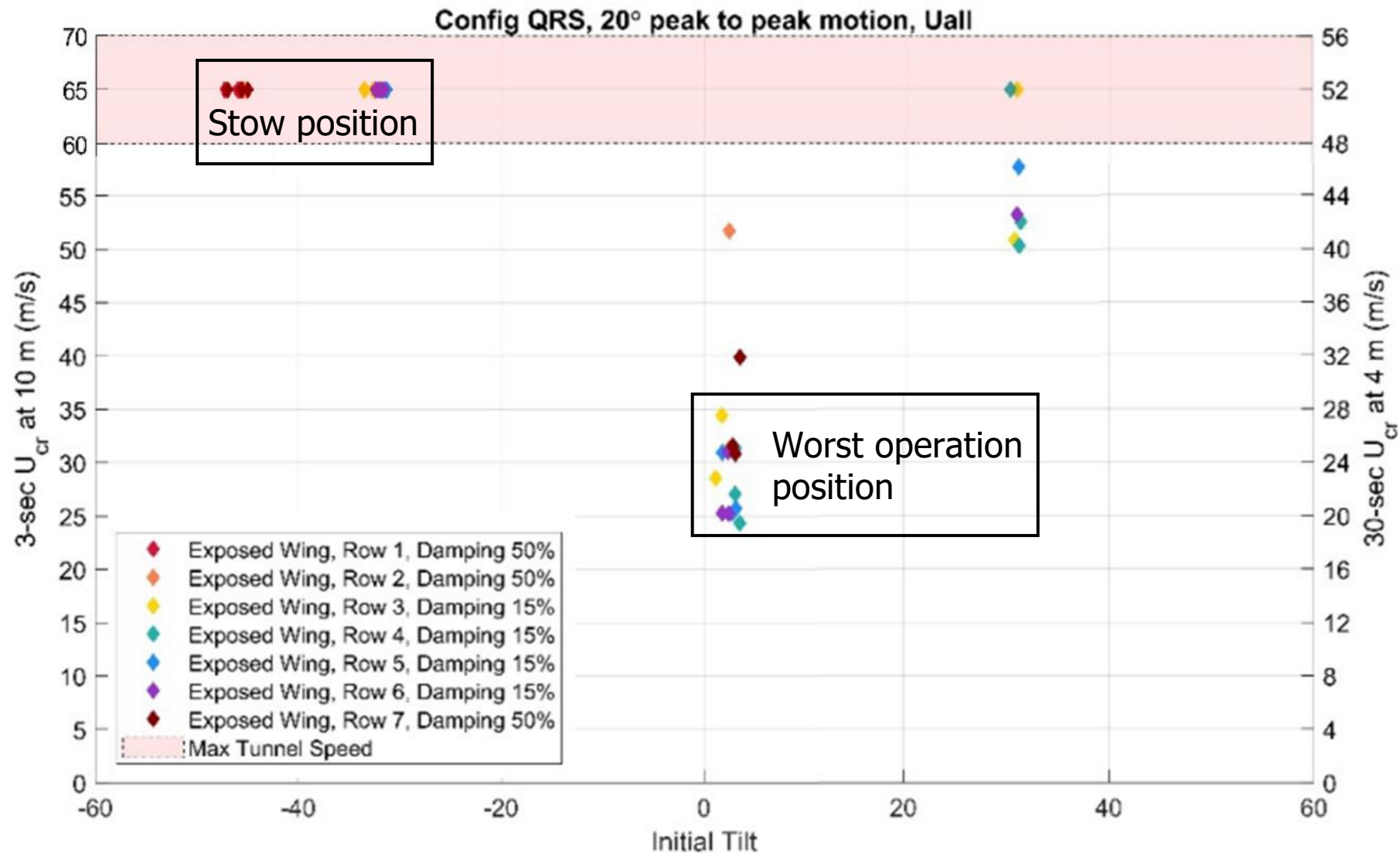
CPP Wind tunnel testing – operation tilt



CPP Wind tunnel testing – stow tilt



CPP Wind tunnel results





soltec.com

EUROPE

HEADQUARTERS

Gabriel Campillo s/n, Pol. Ind. La Serreta 30500
Molina de Segura, Murcia, Spain
+34 968 603 153
info@soltec.com

MADRID

C/ Núñez de Balboa 33, 1ª A
28001 Madrid, Spain
+34 914 497 203
emea@soltec.com

SCANDINAVIA

Walgerholm 7
3500 Værløse, Denmark
+45 20 43 01 50
tscandinavia@soltec.com

ITALY

Via Tevere 41
00198 Roma
italia@soltec.com

ISRAEL

israel@soltec.com

EGYPT

egypt@soltec.com

NORTH AMERICA

UNITED STATES

6100 Waterford at Blue Lagoon, 6100
Blue Lagoon Drive
Miami, Florida 33126
+1 561 690 1624
usa@soltec.com

MEXICO

Torre B, Piso 6, Oficina B2. Plaza Polanco
Jaime Balmes 11, Colonia Los Morales
Delegación Miguel Hidalgo
Ciudad de México, C.P. 11510
+52 1 5555 573 144
mexico@soltec.com

SOUTH AMERICA

BRAZIL

Rua Dr. Barreto 483,
Loteamento Jardim Aeroporto Q-01,
L-09, Bairro Pitangueiras
Lauro de Freitas, BA, Cep: 42701310
+55 071 3026 4900
brasil@soltec.com

CHILE

Rosario Norte 615, Oficina 1503
Las Condes, Santiago 7561211
+56 2 2573 8559
chile@soltec.com

ARGENTINA

Av. del Libertador N° 498 - Piso 3°
Ciudad Autónoma de Buenos Aires
+54 911 4889 1476
argentina@soltec.com

COLOMBIA

Calle 98, No. 10-32, Oficina 302
Bogotá D.C.
+57 1 703 7522
colombia@soltec.com

PERU

Avenida Manuel Olguín 501
Oficina 602, Edificio Macros
Santiago de Surco, Lima
+511 627 9787
peru@soltec.com

ASIA & PACIFIC

AUSTRALIA

Level 33 Australia Square 264
George Street
NSW 2000, Sydney
+61 2 9258 1340
australia@soltec.com

CHINA

Room 606
1118 Nong Pudong South Road
Pudong New District, Shanghai
+86 21 66285799
china@soltec.com

INDIA

303, 3rd Floor, Tower 1
DLF Corporate Park, DLF Phase – 3
Gurugram, Haryana 122002
+91 124 4568202
india@soltec.com