

## Tracking a star to power a planet



### Environmental benefits

- Reduced CO<sub>2</sub> emissions
- Increased solar electricity production
- Reduced land use requirements (more electricity produced per m<sup>2</sup>)



**Compared to a fixed solar installation, the SKF Solar Hub helps increase photovoltaic panel power output by up to 40% for a dual-axis tracker.**

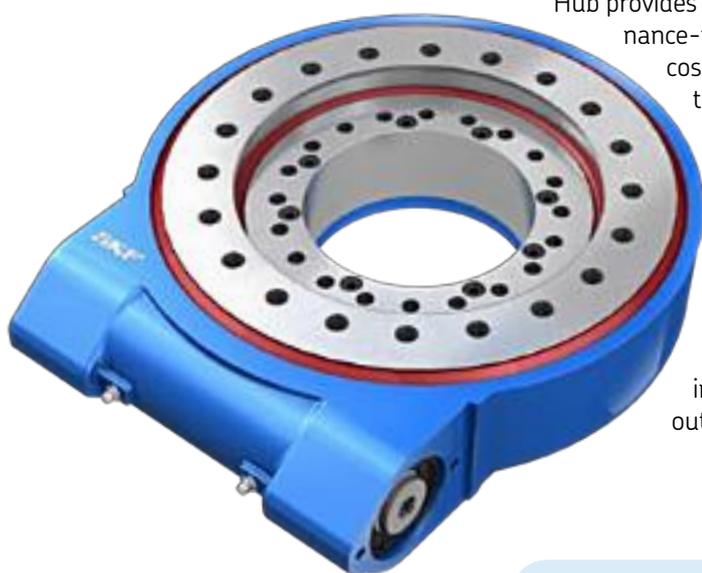
### SKF Solar Hub boosts solar energy collection and helps cut CO<sub>2</sub> emissions

Solar power is one of the cleanest, most abundant forms of energy on the planet. In just six hours of exposure, the Earth's deserts receive more energy from the sun than humankind consumes in a year\*. The SKF Solar Hub is one of several SKF solutions that can help capture more of the sun's energy.

Unlike traditional drives, the SKF Solar Hub provides a virtually maintenance-free, reliable and cost-effective way to track the sun as it moves across the sky. The unit integrates a self-locking gearbox, bearings, lubricant, and sealing solution in a housing for optimal solar tracking performance in even the harshest outdoor conditions.

IP 65 certified, the SKF Solar Hub is designed for usage with photovoltaics, concentrated photovoltaics, or concentrating solar power systems.

Compared to a fixed PV installation, the SKF Solar Hub increases efficiency by 15-20% for a single-axis movement, and 30-40% with a dual-axis movement. These efficiency increases contribute to significant cuts in CO<sub>2</sub> emissions. By increasing the energy production of just one 58 m<sup>2</sup> solar panel by 5,8 MWh per year, the SKF Solar Hub enables an annual reduction of 4,4 tonnes of CO<sub>2</sub> (according to the world power grid mix CO<sub>2</sub> factor of 0,749 kg CO<sub>2</sub>e/kWh).



SKF BeyondZero solutions can help reduce CO<sub>2</sub> emissions, preserve limited resources and protect the environment from the use and spread of toxic substances. For more details, including documentation of reduced environmental impact, visit [www.beyondzero.com](http://www.beyondzero.com)

\*Source: DESERTEC Foundation



# SKF Solar Hub helps generate more solar power

## Operational benefits

- **Designed for 20-year life**
- **Virtually maintenance-free**
- **Accurate tracking due to minimal backlash**
- **Increased power generation**
- **Built for severe environments**
- **Minimized footprint to reduce size and overall cost**

## Operational features

- **Higher load and torque carrying capabilities**
- **Lubricated, sealed and assembled for extended service life**

## Precision tracking and robust reliability

The SKF Solar Hub CRSD 290 is a rotary drive unit consisting of a preloaded main bearing arrangement, gear set and housing. Preloading during the assembly process allows the operator to track the sun with minimal backlash. The unit's worm gear set is self-locking, enabling it to hold a static torque without an additional brake.

Gear set materials and heat treatments deliver high torque-carrying capabilities to reduce wear, enabling longer product life. The SKF Solar Hub also features an optimized seal that helps minimize grease loss during operation while reducing environmental impact. The robust design and materials help the SKF Solar Hub deliver relubrication-free performance for over 20 years, unlike existing market standards that require annual maintenance.

## Wide panel compatibility and design flexibility

The SKF Solar Hub is compatible with panel sizes from 20 to 70 m<sup>2</sup> – even 90 m<sup>2</sup> is possible, depending on the tracker design and wind conditions. The SKF Solar Hub can be delivered with electronics and an integrated AC or DC voltage motor which can be mounted on either the right or left side of the unit.

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