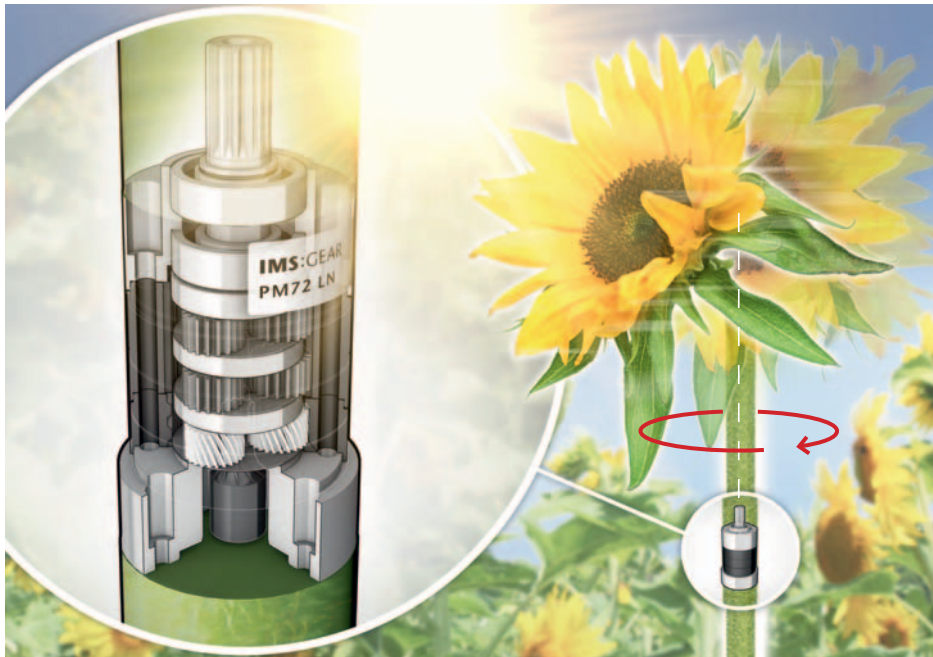


With efficient systems behind the sun – IMS Gear Planetary Gearbox for solar tracker



This immense variety allows designers to match each space, motor, gearbox and transmission components perfectly. There are also many opportunities available to optimize the efficiency of the gearbox specifically to the requirements in photovoltaic systems. Even the quantity structure, in which IMS Gear produces for example the standard gearing components, makes the planetary gear economically interesting for use in solar trackers.

Solar panels which track the sun movement increase the energy output of a photovoltaic system. In the design of the solar tracking systems, the compact planetary gear of IMS Gear offers installation flexibility and the implementation of various requirements. They also provide technically and economically a high-performance solution.

The tracking of solar modules in photovoltaic systems improves their energy output. For this the so-called solar trackers are used. The greater overall performance, however, is then compared with a calculation of return of the acquisition and maintenance costs. Out of these results it requires to realize very efficient systems. The research is focused on adjustment mechanisms, starting with selecting the right drive solution. Especially the transmission determines the implementation of the entire rack frame with its performance and design. Planetary gears from the

modular system of IMS Gear offer opportunities for technical and economic optimum solutions.

Compared to other transmission types, the advantages of planetary gears is their comparatively compact design with high power density. This makes drive solutions, including motor, planetary gearbox and for example a lead screw, a very rigid and torsionally stiff system which is ideal for high wind loads on the solar modules. These drives simultaneously fulfill the requirements for reduced system backlash and self-locking capability.

In addition to these features the flexibility of input and output mounting configurations of the planetary gear, the liberties gained in the structural design of a solar tracker, leads to an Economic sustainability factor. Furthermore there is the variety of offered configurations. In the highly modular system of the IMS Gear group, users find more than 10,000 configurations in plastic, plastic-metal or metal.



Photo 1: Planetary gear size 72



Photo 2: Exploded drawing