

ISO 9001 Company



HelioGlide™

Solar Tracker Bearings
from Poly Fluoro Ltd.

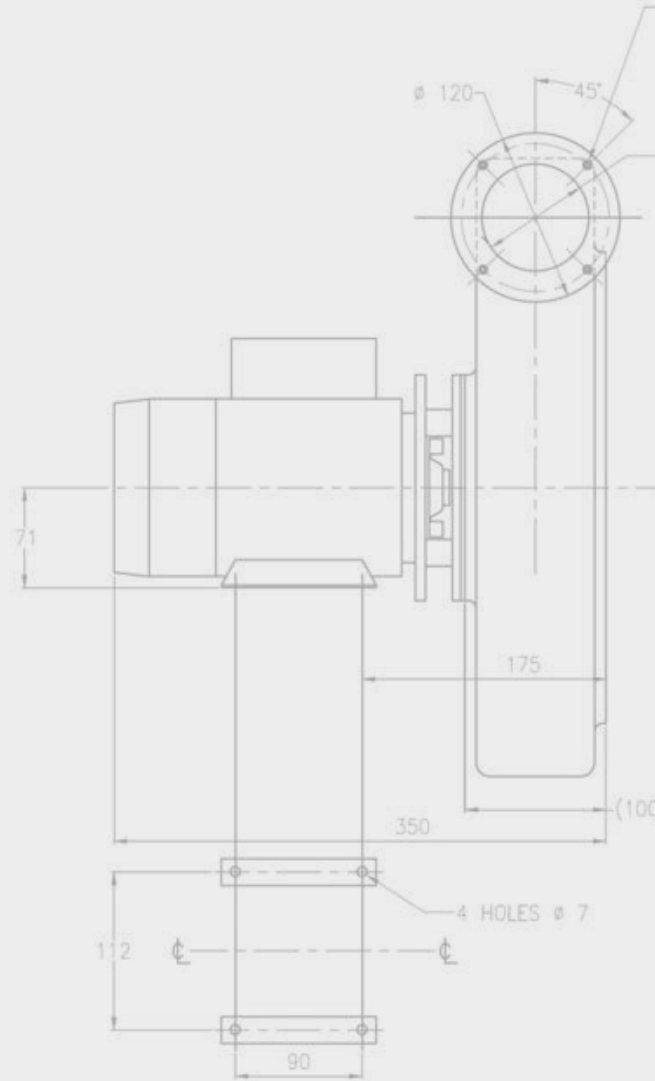
About Poly Fluoro

Since establishment in 1985 Poly Fluoro Ltd. has been at the forefront of thermoplastic innovation, pioneering the manufacture and application of engineered plastics in India.

We are an accredited ISO 9001 system, based in a modern 20,000-sq.ft plant, offering complete design, prototype and production services. This incorporates the capacity to mould, extrude, cast, expand and machine both virgin and formulated polymer materials from sizes ranging from 1mm to in excess of 500mm diameters.

Allying a traditional engineering background with in-house material production and innovative new techniques, we have developed a unique range of products that are tailored to suit numerous applications.

To many, Poly Fluoro Ltd. and its extensive range of formulated polymer specialty components is synonymous with the finest, most dependable engineering plastic for OE fitment. Over 100 OEMs regularly source their polymer requirements from us with an increasing number of these being import substitutes.



HelioGlide: Solar Tracker Bearings

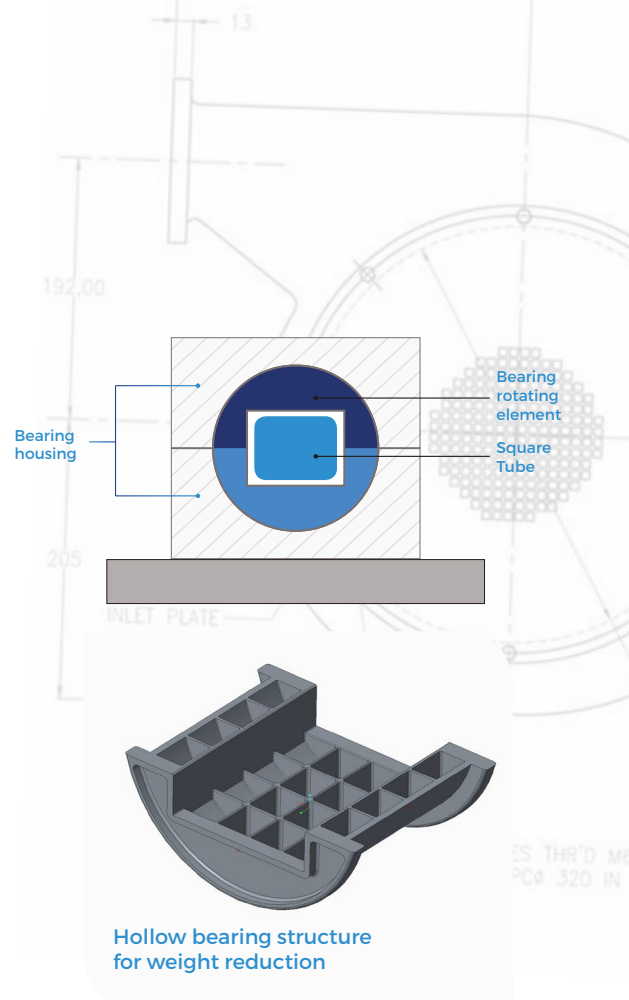
The advancement of solar energy has pushed equipment manufacturers to constantly optimise the materials used such that maximum efficiency can be attained. Unlike coal based power plants, solar power plants are highly dependent on weather conditions for their output. Furthermore, the net output of the plant rests on its ability to minimise the energy used in operating the mechanisms within the plant. The solar tracker is perhaps the most vital equipment involved in the process, as it allows the panels to follow the sun's movement.

Poly Fluoro has used its strengths in polymer grade selection and application knowhow to develop speciality bearings for solar tracker applications. HelioGlide bearings are custom developed taking care to understand the operating conditions of the plant as well as the load and dimensional requirements of the solar tracker itself.



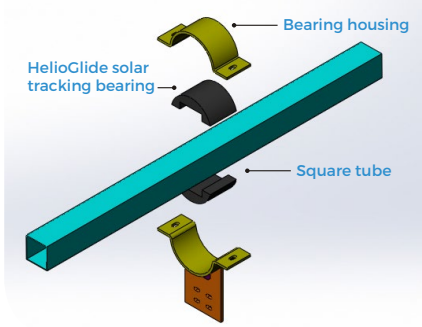
Advantages of HelioGlide Bearings

- 1. Lightweight** – HelioGlide bearings have a large strength to weight ratio. Unlike a metallic bearing, the weight of the polymer bearing does not itself impose an additional load on the solar tracker, thereby minimising energy requirements
- 2. Wear resistant** – HelioGlide is made using special wear reducing additives. This allows the bearing to consistently perform without needing replacement across the life of the power plant
- 3. Self-lubricating** – most of the polymers we use require minimum to no external lubrication. This means lower maintenance and upkeep.
- 4. Weather resistant** – Our polymers are UV stabilised and weather resistant. This is a critical characteristic of HelioGlide bearings, as solar plants are usually located in areas with harsh weather conditions.
- 5. Cost effective** – While HelioGlide is made from high-performance polymers, we ensure that the final solution is cost effective for the customer
- 6. Fully customizable** – With a full dedicated moulding and machining facility, Poly Fluoro is able to ensure that we make the final product as per customer drawing requirements. The customer will never be asked to choose an off-the-shelf product, as we ensure that we tailor our product to the customer’s design



Hollow bearing structure for weight reduction

Typical bearing assembly:



Choice of polymer

At Poly Fluoro, we have studied the application of solar tracker bearings and devised a number of formulations for different operating conditions. However, we remain partial to a few base polymers, which are then modified with additives to attain the final properties we require.

Polymer Type:	Polyamides	Polyacetals	Polyethelenes
Advantages:	Easily injection moulded Highly customisable Good machinability Lightweight	Low moisture absorption Lightweight High dimension stability Good machinability	Low moisture absorption Ultra-lightweight Cost effective Good machinability