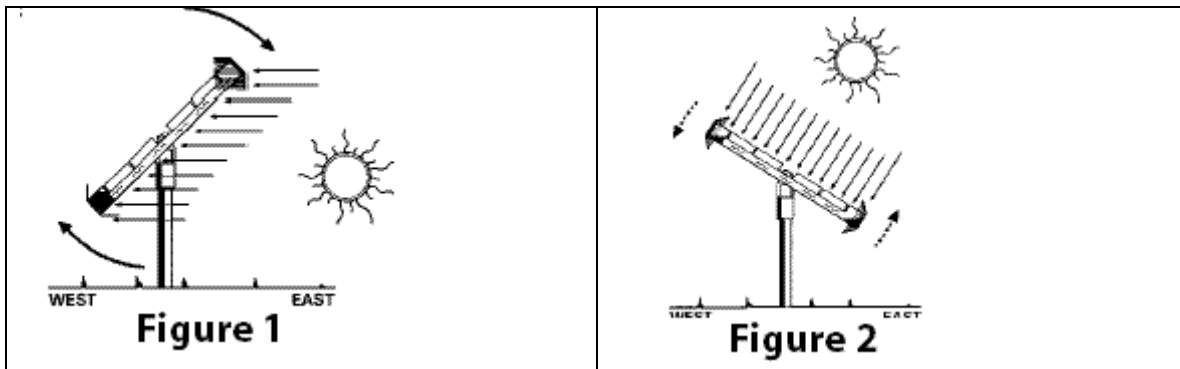


HOW THE TRACKER FOLLOWS THE SUN

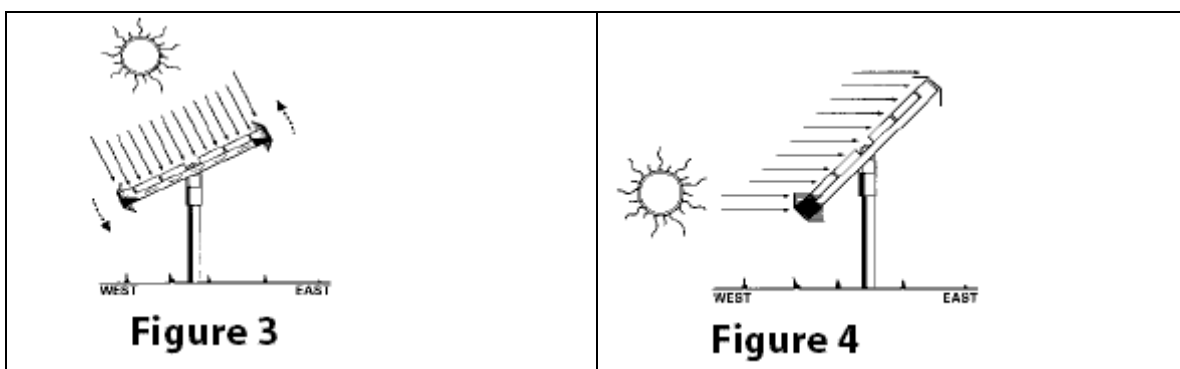
A tracker mount follows the path of the sun from east to west, keeping the solar modules facing directly toward the sun from dawn to dusk. This can result in a 25% increase in your daily energy production during the summer as compared to the same solar array on a fixed mount. The trackers operate passively (see how they work below) without any motors, gears or pistons to wear out making them almost as dependable as gravity and the heat of the sun. These units are ideal for water pumping systems since power is produced in a gradual dawn to dusk flow rather than around a noon peak. The north-south tilt axis can be adjusted seasonally for peak performance throughout the year. The use of a tracker increases the amount of water pumped per day and makes the most of your solar modules and pump.

The Tracker begins the day facing west (see figure 1). As the sun rises in the east it heats the unshaded west side canister from behind the solar array forcing liquid through an interconnecting copper tube and into the shaded east side canister. As this happens, the east side canister becomes heavier causing the tracker to rotate to the east



The movement of the liquid is controlled by the aluminum shadow plates mounted on the outside of each canister. When one canister is exposed to the sun more than the other, its vapor pressure increases which forces liquid freon to the cooler shaded side.

As the sun moves across the sky from east to west (see figures 2 and 3) the Track Rack follows it at approximately 15° per hour continually seeking equilibrium as liquid freon moves from one side of the tracker to the other.



The tracker ends the day facing west (see figure 4) where it sits waiting for the sun to rise in the east the next morning to start the cycle all over again