

Mirror Installation

The video below shows the simple installation of the module. First the energy storage shed is moved into place. The shed comes as a one-piece assembly having hose and electrical connections to the collector. Next the collector's frame is installed in front of the shed. The frame, absorber and mirrors come in a second box. The frame is installed with the absorber held by tubes above the frame. Only common hand tools are needed for assembly.

The video starts with the frame assembled in front of the shed. Each mirror has a square socket in each end. Mirror assembly begins by sliding a motor post onto a mirror socket at the top of the frame. Each mirror in turn is slid onto its respective motor post until all mirrors are placed. Then the axle post on the mirror's other end is attached to the bottom of the frame. Only two bolts hold each attach the axle post to the frame.



When all mirrors are attached, the module is ready for operation. In the video, the mirrors are installed with their shiny mirror surface facing down. This configuration called “Safe Mode” is used to protect the mirrors from damage and nighttime dust buildup.

Depending on the weather, the mirrors can be rotated in different ways. If the wind speed is too high, the mirrors rotate to safe mode, lowering the collector's wind profile while protecting its mirrors from damage by flying debris. If there is a potential hail storm, the mirrors rotate to protect them from hail damage.

Rain is different. If we know that rain is imminent and wind speed is low, the mirrors rotate to bring their shiny surface up to clean their mirrors. Snow is also different. If snow levels are low, the mirrors open in a way that removes snow buildup. If snow levels are high, a different strategy uses roof heat to melt the snow.