

Collector Placement and Attachment

South southeast and southwest are the best exposures for solar collectors, although east, west and flat or a combination of either can be utilized to accommodate the number of collectors required for your size pool.

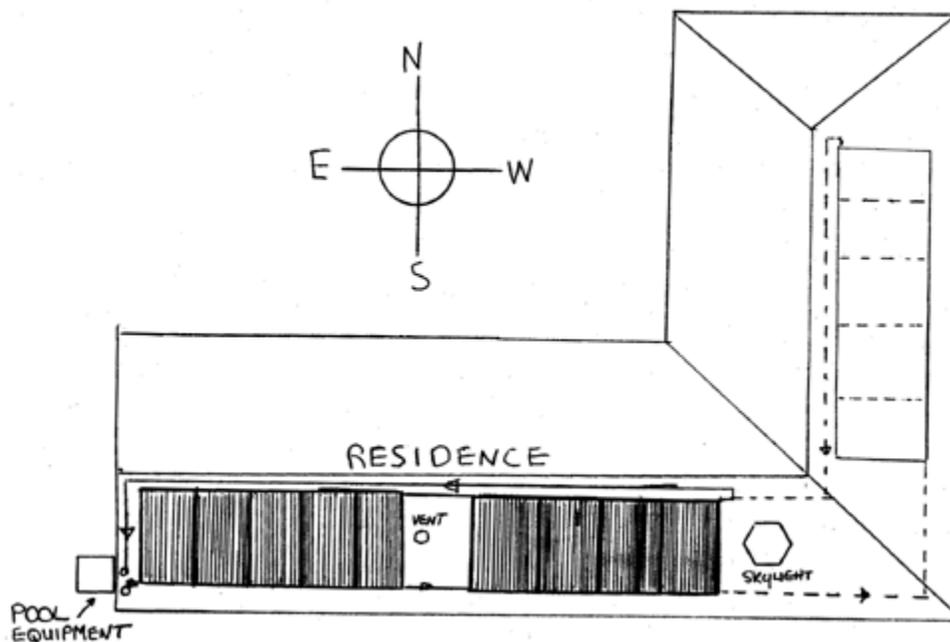
Solar collectors offered are applicable to mounting all roof materials.

Where additional land is available, a support ground mounted structure can be built to accommodate solar collectors.

When measuring the roof for solar collectors, take into consideration obstructions such as skylights, vents and chimneys.

ALWAYS leave enough distance if possible around collectors for servicing.
Keep panels as close to hips and valleys to allow for adding panels in the future if needed.

Leave enough room between collector banks and side of collector arrays to accommodate piping runs.



Collector Placement

Gull Sun Coil

Pitched Roofs

Sun Coil can be mounted directly to all type roof materials with one roof penetration. Built-in substrate supports collector on uneven roof materials.

Flat Roofs or Cabanas

No penetration to roof is required. Since collectors do not drain when laid flat, water weight of 137 lbs. hold the panel to the roof.

Rack Mounted

Sun Coils require either a solid base or staggered support. Refer to rack designs.

API Poly Pro

Pitched Roofs - Composition or Medium Shake Roofs

Poly Pro can be attached directly to these roofs.

Pitched Roofs - Heavy Shake, Flat Tile or Metal Roofs

Poly Pro will require a fiberglass substrate under the collector to support off uneven surface.

'S' Style Roofs

Poly Pro will require 4 (four) 1' x 4' redwood stringers be attached to tile to facilitate attachment of collector hold down strapping. Also, a fiberglass substrate is recommended to support panel off uneven surface.

Flat Roofs or Cabanas

Poly Pro collectors must be tilted off flat surface 5 to 10 degrees to facilitate for draining to protect against damage from freezing. Refer to rack designs.

API All Metal 4000 & 5000

Pitched Roofs

All roof materials, other than 'S' style tile, Gull collectors require a 2' x 4' block and 1' x 4' stringer attachment. On 'S' style tile only a 1' x 4' stringer attached to the roof is required.

Flat Roofs or Cabanas

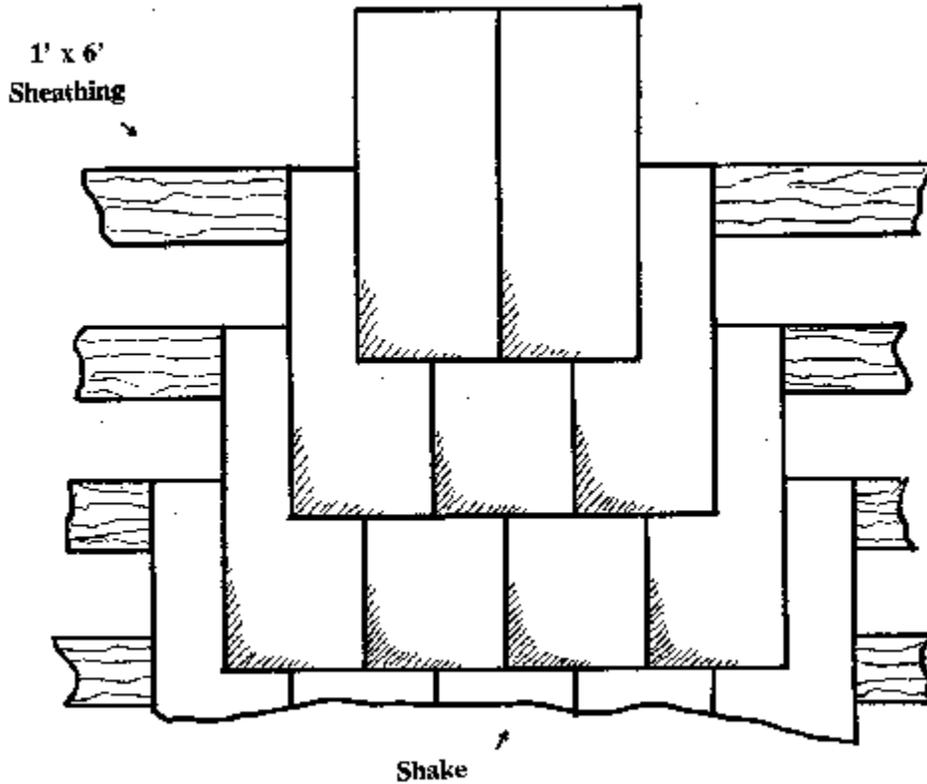
Gull Metal collectors must be tilted off flat surface 5 to 10 degrees to facilitate for draining to protect against damage from freezing.

Rack Mounted

Gull collectors are self-supporting. 4' x 8' and 4' x 10' require two supports, 4' x 12' require three supports. Refer to rack designs.

Shake Roofs

Shake is attached to a 1' x 4' or 1' x 6' sheathing with nails or staples. To identify the nail line, lift the shake. The location of the nail line will run the entire width of the roof in the same location. The nail line is the base for attaching solar collectors or supporting framework.

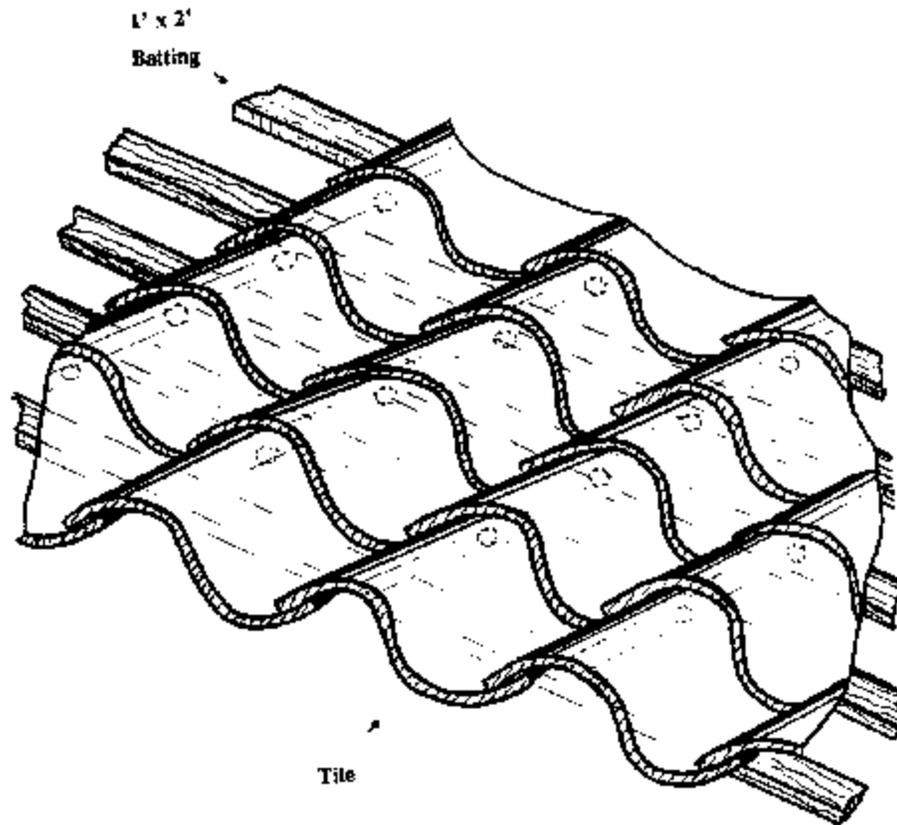


Tile Roofs

'S' Tile, Flat Tile, or Metal Tile

Tile is attached to a 1' x 2' or 2' x 2' batting. To locate, measure 1½" to 2" up from the lip of the tile. Pre-drill through first tile--then the second. When located, the batting will run the entire width of the roof in the same location.

As an alternative to drilling through tile, the tile can be lifted up and out exposing the batting. A steel framing strap or perforated plumbers tape can then be attached to the batting. Make sure the strap is of sufficient length that when the tile is reinstalled, either wood as a solar attaching base of the solar product itself can be attached to the strap.



Composition or Synthetic Roofs

All of these types of roof materials are attached to a solid plywood deck, which is usually of sufficient thickness to attach directly to. If thickness of plywood is not sufficient, attachment to roof rafters may be necessary.