

⇒ The performance of solar flat collectors are probably the most fundamental and most studied technology for solar-powered. The idea behind this technology is pretty simple. The Sun heats a dark flat surface, which collects as much energy as possible, and then the energy is transferred to water, air, or other fluid for further use.

The main component of flat solar collector is :-

- Black surface - absorbent of incident solar energy.
- Glazing cover - a transparent layer that transmits radiation to the absorber, but prevent radiative and conductive heat loss
- Tubes containing heat fluid to transfer heat from the collector
- Support structure to protect the component and hold them in place
- Insulation covering side and bottom of the collector to reduce heat loss.

