



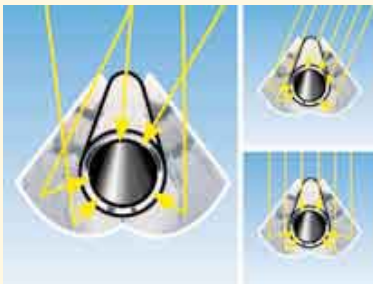
CPC 12/CPC 18

Solar collectors



www.solar-one.ca

Angle of incidence



Even at unfavourable angles of incidence, both direct and diffuse sunlight are optimally directed to the absorber thanks to the mirror geometry.

The **LATENTO** vacuum tube collectors perform convincingly at all times, having a very low heat loss and thus a very high efficiency, resulting in high solar yields even in transitional and winter months.

A highly-reflective, weather-resistant CPC mirror makes sure that the sun's rays from almost every direction and even at unfavourable angles of incidence are directed onto the absorber. Arrangement of the vacuum tubes to face in a particular direction is not necessary.

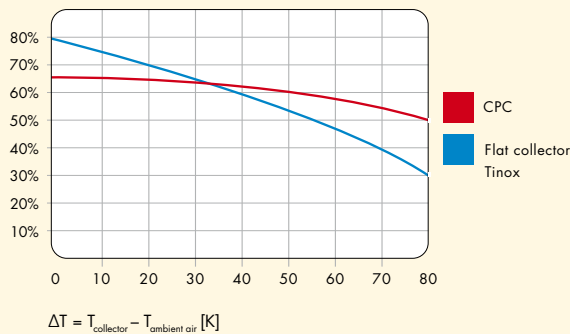
What you can expect from IVT solar collectors:

- very fast reaction times
- almost loss-free (< 6%)
- resistant to weather and ageing
- high performance even on cool days
- easy to install
- fracture-resistant (for example hail)
- "Made in Germany"
- "Solar Keymark" (DIN tested)

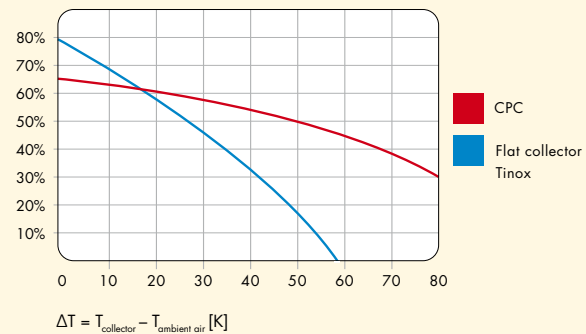


Comparison of the efficiency curves of the CPC collector and a flat collector

800 W/m² radiation incidence



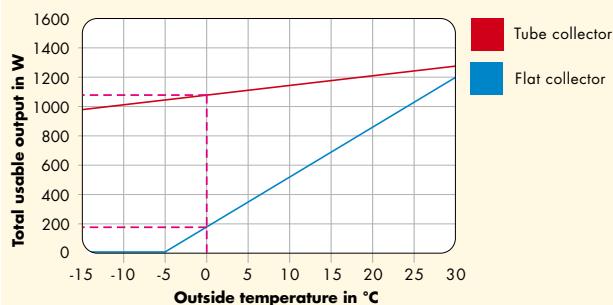
300 W/m² radiation incidence



The vacuum of the CPC tube collectors (thermos-flask principle) ensures a low rate of heat radiation and thus a high rate of efficiency, above all on days when

ambient temperatures are low or the sun's radiation is diffuse – in other words, at all times when heating support is needed.

Comparison of the output of a CPC vacuum pipe collector with a flat collector



Example: output of a 7 m² collector area on an average January day (300 W solar radiation and 0°C outside temperature)

- The flat collector (efficiency approx. 10%) achieves a usable output of about 0.2 kW
- The tube collector (efficiency approx. 50%) achieves a usable output of about 1 kW

On an average January day, taking Würzburg as our example, with approx. 0°C outside temperature and 300 W/m² radiation intensity, the CPC tube collector with 7 m² collector area achieves over 1,000 W of

usable output, and the flat collector just 200 W. Increasing the collector area does not lead to higher temperatures and thus a better yield.