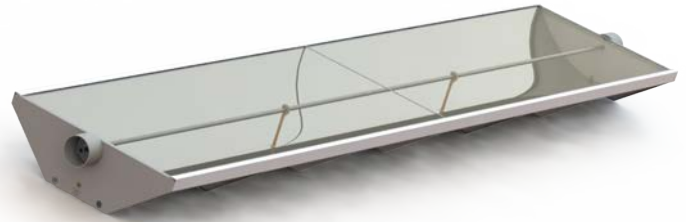




Data Sheet

T160 Solar Collector

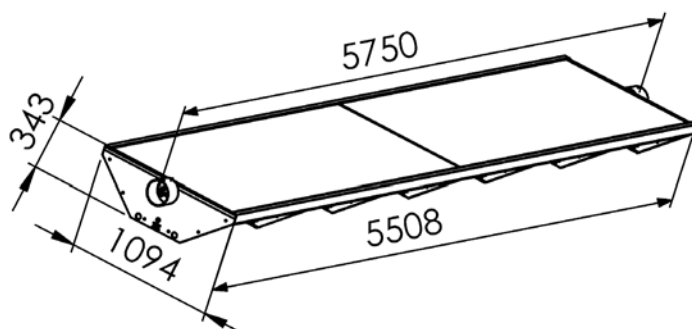


Technical Information for the T160 Solar Collector

The T160 is a medium sized parabolic concentrator for heat production on temperatures up to 160 °C. The collector produces heat by concentrating the incoming sunlight onto a receiver tube, where the heat transfer fluid is circulated.

The collector is mounted on beams, in groups of four. The beams contain an active tracking system that allows the collectors to track the sun. The tracking system is also designed to protect the solar collectors from overheating, excessive wind loads and other harmful conditions.

| | |
|---|---|
| Model Name: | Absolicon T160 |
| Collector Type: | Glass-covered parabolic trough collector with one-axis tracking |
| Recommended Heat Transfer Fluid: | Water, Propylene Glycol (max 40%) |
| Volume of Heat Transfer Fluid: | 2.2 liter |
| Operational Temperature: | 60 - 160 °C |
| Stagnation Temperature: | 460 °C |
| Maximum Operating Pressure: | 16 bar |
| Receiver: | Stainless steel, optically selective coating |
| Glass: | 4 mm hardened glass, antireflective coating |
| Reflector: | Polymer embedded silver on steel sheet |
| Weight: | 148 kg |
| Dimensions: | 5508 mm X 1094 mm X 343 mm |



Performance test summary

Test Method:
Quasi Dynamic

Collector aperture area:
5.5 m²

Performance Parameters, based on aperture area

| | |
|----------|-----------------------------|
| η_0 | 0.766 |
| a_1 | 0.368 W/m ² °C |
| a_2 | 0.00322 W/m ² °C |
| K_d | 0.0859 |

Incidence angle modifier in east-west orientation

| θ | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
|-----------------|------|------|------|------|------|------|------|------|----|
| $K_b(0,\theta)$ | 0.99 | 0.99 | 0.98 | 0.96 | 0.91 | 0.77 | 0.53 | 0.18 | 0 |

Pressure drop properties

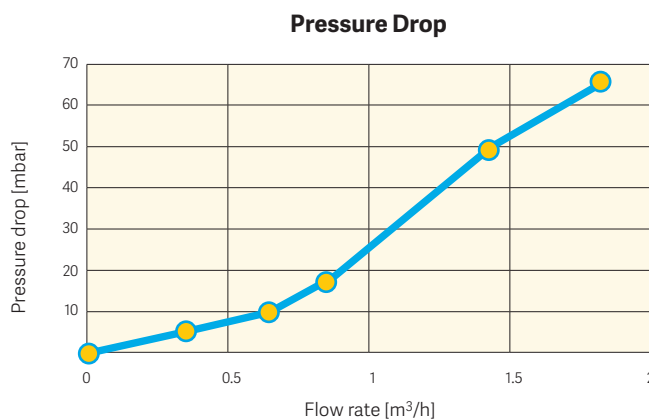
Test Method:
ISO 9806:2013,
clause 28

Ambient temperature:
15±2 °C

Fluid temperature:
20±0.5 °C

Collector pressure drop

| | | | | | | |
|-------------------------------|-----|-----|-----|-----|-----|-----|
| Flow rate [m ³ /h] | 0.0 | 0.3 | 0.6 | 0.8 | 1.4 | 1.8 |
| Pressure drop [mbar] | 0.0 | 4 | 9 | 16 | 40 | 63 |



For more information please contact:

Absolicon Solar Collector AB

www.absolicon.com