Collectors
SOLAR THERMAL
COLLECTORS &
DRAINBACK SYSTEM

Range of solar thermal collectors available with or without drainback system.

• Approved by EN12975-2-2006 and Solar Keymark certified
• Temperature resistant up to 200°C
• Installation options: roof unit (SPBO), built into the roof (SPBI), flat-roof mounting console (SPFR), wall-mounted console (SPWL)
• Simple installation system even with multiple collectors
• The system is supplied with all parts needed for complete installation. The entire package is available as a single order number
• Patented drainback system to prevent stagnation temperature is available as an accessory
• Sets are available in two versions: with copper absorber and meander, or with copper absorber and aluminum meander
• Frame construction collectors can be delivered with or without concrete blocks
• All sets can be delivered in horizontal or vertical aligned collectors
• Can be set up with up to 15 collectors in one row, multiple rows for large collector fields or for adjustment to available roof space

SAMPLE SPECIFICATION
Solar collectors will have a fully copper collector absorber plate and copper meandering tubes, welded with ultra sound welding process, encased in aluminum weather resistant profile. Rear side will be stucco sheet to prevent corrosion. Insulation will be minimum 60 mm rockwool. The copper solar absorption plate will have a vacuum applied sputtered absorption layer on the absorber for maximum efficiency. Working pressure of the collector will be 6 bar, tested at 10 bar. Collector will be suitable for high temperature glycol solar fluid. Collectors will be equipped with a drain back tank to prevent over heating of solar fluid. Collectors will be complying with EN12975-1:2011-01 and EN12975-2:2006-6 and current CEN-Keymark. Solar glass will be SPF certified.
### TECHNICAL DETAILS

#### COLLECTORS

<table>
<thead>
<tr>
<th>Field width</th>
<th>Field width</th>
<th>Field width</th>
<th>Field width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field height</td>
<td>Field height</td>
<td>Field height</td>
<td>Field height</td>
</tr>
</tbody>
</table>

### FIELD WIDTH

<table>
<thead>
<tr>
<th>Number of collectors</th>
<th>Every extra collector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical collector</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>116.7</td>
</tr>
<tr>
<td>2</td>
<td>238.7</td>
</tr>
<tr>
<td>3</td>
<td>306.7</td>
</tr>
<tr>
<td>4</td>
<td>482.7</td>
</tr>
<tr>
<td>5</td>
<td>604.7</td>
</tr>
<tr>
<td>6</td>
<td>122.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal collector</th>
<th>Number of collectors</th>
<th>Every extra collector</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>206.7</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>418.7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>630.7</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>842.7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>122.7</td>
<td></td>
</tr>
</tbody>
</table>

### FIELD WIDTH

<table>
<thead>
<tr>
<th>Number of collectors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical collector</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal collector</th>
<th>Number of collectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>116.7</td>
</tr>
<tr>
<td>2</td>
<td>238.7</td>
</tr>
</tbody>
</table>
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net collector surface m²</td>
<td>2.20</td>
</tr>
<tr>
<td>Total collector surface m²</td>
<td>2.52</td>
</tr>
<tr>
<td>Length collector surface mm</td>
<td>2100</td>
</tr>
<tr>
<td>Width collector surface mm</td>
<td>1200</td>
</tr>
<tr>
<td>Height collector surface mm</td>
<td>110</td>
</tr>
<tr>
<td>Frame material</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Glass</td>
<td>ESG Sun Glass</td>
</tr>
<tr>
<td>Insulation</td>
<td>60mm Rockwool</td>
</tr>
<tr>
<td>Heat absorber</td>
<td>Copper</td>
</tr>
<tr>
<td>Maximum working pressure kPa</td>
<td>600</td>
</tr>
<tr>
<td>Capacity unit of solar fluid l/m²</td>
<td>2.2</td>
</tr>
<tr>
<td>Flow of solar fluid l/m²</td>
<td>15-40</td>
</tr>
<tr>
<td>Maximum admissible temperature °C</td>
<td>208</td>
</tr>
<tr>
<td>Collector aperture area m²</td>
<td>2.24</td>
</tr>
<tr>
<td>Zero loss efficiency %</td>
<td>0.78</td>
</tr>
<tr>
<td>First order coefficient W/(m²K)</td>
<td>3.59</td>
</tr>
<tr>
<td>Second order coefficient W/(m²K²)</td>
<td>0.01</td>
</tr>
<tr>
<td>Indicent angle modifier</td>
<td>0.93</td>
</tr>
<tr>
<td>Length collector mm</td>
<td>1167</td>
</tr>
<tr>
<td>Width collector mm</td>
<td>2067</td>
</tr>
<tr>
<td>Thinkness collector mm</td>
<td>110</td>
</tr>
<tr>
<td>Weight kg</td>
<td>44</td>
</tr>
</tbody>
</table>

### DISTANCE BETWEEN COLLECTORS

<table>
<thead>
<tr>
<th>Collector type</th>
<th>20°</th>
<th>30°</th>
<th>45°</th>
<th>60°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>270</td>
<td>310</td>
<td>320</td>
<td>330</td>
</tr>
<tr>
<td>Vertical</td>
<td>440</td>
<td>515</td>
<td>600</td>
<td>650</td>
</tr>
</tbody>
</table>

### HEIGHT ASSEMBLED COLLECTORS

<table>
<thead>
<tr>
<th>Collector type</th>
<th>20°</th>
<th>30°</th>
<th>45°</th>
<th>60°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>53</td>
<td>71</td>
<td>93</td>
<td>110</td>
</tr>
<tr>
<td>Vertical</td>
<td>71</td>
<td>104</td>
<td>147</td>
<td>180</td>
</tr>
</tbody>
</table>

### DISTANCE TO FRAME

<table>
<thead>
<tr>
<th>Height balustrade</th>
<th>Distance C</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>70</td>
<td>125</td>
</tr>
<tr>
<td>80</td>
<td>150</td>
</tr>
<tr>
<td>90</td>
<td>180</td>
</tr>
<tr>
<td>100</td>
<td>205</td>
</tr>
<tr>
<td>110</td>
<td>20</td>
</tr>
</tbody>
</table>

### POSITION STAND

<table>
<thead>
<tr>
<th>Angle</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHORT TRAVERSE</td>
<td>40</td>
</tr>
<tr>
<td>20°</td>
<td>40</td>
</tr>
<tr>
<td>30°</td>
<td>70</td>
</tr>
<tr>
<td>LONG TRAVERSE</td>
<td>125</td>
</tr>
<tr>
<td>45°</td>
<td>125</td>
</tr>
<tr>
<td>60°</td>
<td>150</td>
</tr>
</tbody>
</table>