

ANNEX A3. Parts list, drawings and specifications, Solar Keymark Collectors

Normative annex.

Version of 2010-02-19.

Parts list

For each of the collectors of a certification series parts list (bill of materials) must be made available to the inspector / test institute. The parts list shall include all parts of the collector, any changes done to the collector initially tested and the date of revision.

Engineering drawings

Each of the collectors of a certification series must be accompanied by a set of engineering drawings fully dimensioned, including sectional views. Drawings shall have a number, date of issue and possible revision date. These drawings have to include at least the following:

Flat plate collector	Evacuated tube collector
<input type="checkbox"/> General view	<input type="checkbox"/> General view
<input type="checkbox"/> Casing	<input type="checkbox"/> Tube
<input type="checkbox"/> Absorber	<input type="checkbox"/> Absorber
<input type="checkbox"/> Transparent cover	<input type="checkbox"/> Reflector
<input type="checkbox"/> Insulation	<input type="checkbox"/> Heat transfer sheet
	<input type="checkbox"/> Heat pipe
	<input type="checkbox"/> Manifold

Specifications

The components listed below must be described and specified using data sheets (alternatively the specification can be documented in the corresponding drawing) that contain at least the following information.

<p>Absorber (flat plate absorber and evacuated tube absorber)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Material <input type="checkbox"/> Thickness <input type="checkbox"/> Absorption and emission of the absorber coating <input type="checkbox"/> Connection between absorber plate and piping
<p>Transparent cover (flat plate absorber and evacuated tube absorber)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Material <input type="checkbox"/> Type (e.g. toughened glass, etc.) <input type="checkbox"/> Thickness <input type="checkbox"/> Surface properties (e.g. structure, coatings, etc.) <input type="checkbox"/> solar transmission at normal incidence (air mass 1.5)

<p>Insulations (flat plate absorber and evacuated tube absorber)</p> <p><input type="checkbox"/> Material</p> <p><input type="checkbox"/> Type (e.g. open porous, closed porous, etc.)</p> <p><input type="checkbox"/> Thickness</p> <p><input type="checkbox"/> Density</p> <p><input type="checkbox"/> thermal conductivity</p>
<p>Casing (flat plate absorber and evacuated tube absorber)</p> <p><input type="checkbox"/> Material</p> <p><input type="checkbox"/> Surface treatment</p>
<p>Heat pipe (evacuated tube absorber)</p> <p><input type="checkbox"/> Material</p> <p><input type="checkbox"/> used medium</p> <p><input type="checkbox"/> fluid content</p> <p><input type="checkbox"/> pressure</p>
<p>reflector (evacuated tube absorber)</p> <p><input type="checkbox"/> Material</p> <p><input type="checkbox"/> Surface treatment (polished, coated, etc.)</p> <p><input type="checkbox"/> reflectivity</p>
<p>Heat conductive paste (evacuated tube absorber)</p> <p><input type="checkbox"/> Information about the use of heat conductive paste</p> <p><input type="checkbox"/> technical specifications</p>

Remarks:

- If several sizes of the same collectors are certified, all documents have to be submitted for all the individual collectors.
- In case of special collector designs the delivery of additional documents might be required.
- The documents are kept strictly confidential by the inspector / test institute. If possible we ask you to submit these drawings by email in pdf format and as hard copy by mail.
- The documents must be supplied to the inspector / test institute either in the language of the country that the inspector / test institute is located or in English.

Annex B

Collector label, Solar Keymark Collectors

Checklist to assess the compliance of the collector label with the requirements according EN 12975-1

According to EN 12975-1, section 7.2 Labelling, the collector shall carry a visible and durable label with the following data:

	yes	no
name of manufacturer	<input type="checkbox"/>	<input type="checkbox"/>
collector type	<input type="checkbox"/>	<input type="checkbox"/>
serial number	<input type="checkbox"/>	<input type="checkbox"/>
year of production	<input type="checkbox"/>	<input type="checkbox"/>
gross area of collector	<input type="checkbox"/>	<input type="checkbox"/>
dimensions of collector	<input type="checkbox"/>	<input type="checkbox"/>
maximum operation pressure	<input type="checkbox"/>	<input type="checkbox"/>
stagnation temperature at 1000 W/m ² and 30°C	<input type="checkbox"/>	<input type="checkbox"/>
volume of heat transfer fluid	<input type="checkbox"/>	<input type="checkbox"/>
weight of empty collector	<input type="checkbox"/>	<input type="checkbox"/>
made in:	<input type="checkbox"/>	<input type="checkbox"/>

Annex C

Installer instruction manual, Solar Keymark Collectors

Checklist to assess the compliance of the installer instruction manual with the requirements according EN 12975-1

According to EN 12975-1, section 7.3 installer instruction manual solar collectors shall be accompanied by an installer instruction manual. When the collector is part of a complete system, the system installation manual can cover the complete system. The instruction manual shall at least contain the following information (please indicate the page of the document where the requested information can be found):

	yes	no	Page
dimensions and weight of the collector	<input type="checkbox"/>	<input type="checkbox"/>	
instructions about the transport and handling of the collector	<input type="checkbox"/>	<input type="checkbox"/>	
description of the mounting procedure	<input type="checkbox"/>	<input type="checkbox"/>	
name of manufacturer	<input type="checkbox"/>	<input type="checkbox"/>	
instructions about the coupling of the collectors to one another and the connection of the collector field to the heat transfer circuit for collector arrays up to 20 m ²	<input type="checkbox"/>	<input type="checkbox"/>	
dimensions of pipe connections for collector arrays up to 20 m ²	<input type="checkbox"/>	<input type="checkbox"/>	
recommendations about the heat transfer media	<input type="checkbox"/>	<input type="checkbox"/>	
precautions to be taken during filling, operation and service	<input type="checkbox"/>	<input type="checkbox"/>	
the maximum operation pressure	<input type="checkbox"/>	<input type="checkbox"/>	
the pressure drop	<input type="checkbox"/>	<input type="checkbox"/>	
the maximum and minimum tilt angle	<input type="checkbox"/>	<input type="checkbox"/>	
permissible wind and snow load	<input type="checkbox"/>	<input type="checkbox"/>	
maintenance requirements	<input type="checkbox"/>	<input type="checkbox"/>	

All relevant documentation concerning personal safety, maintenance and handling of the product shall be made available to the customer in the national language of the country where it is sold. A list of the available installer manual languages shall be submitted.

Please note:

The Solar Keymark certification is not possible if some of the information is missing or not complete!