

# THE KEY TO THE EUROPEAN MARKET: SOLAR KEYMARK

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## ABSTRACT

The CEN Keymark certification scheme has been available for solar thermal products in Europe since 2003. **This so-called “Solar Keymark” states conformity with the European Standards for solar thermal products.**

Solar Keymark is the key to the European market because:

- Products with Solar Keymark have access to all national subsidy schemes in EU member states
- In some Member States it is now obligatory that solar collectors show the Keymark label (e.g. Germany).
- People expect the Solar Keymark – most collectors sold now are Keymark certified

The three elements in the 3<sup>rd</sup> party Keymark certification are:

- Type testing according to European standards (test samples to be sampled by independent inspector)
- Initial inspection of factory production control (quality management system at ISO 9001 level)
- Surveillance: Annual inspection of factory production control
- Biannual “surveillance test”: Detailed inspection of products

## 1. INTRODUCTION

The Solar Keymark certification scheme was introduced in order to harmonise national requirements for solar thermal products in Europe. The goal was: Once tested and certified the product should have access to all national markets. This goal has now been achieved – except for some minor supplementary requirements in a few Member States.

## 2. SOLAR KEYMARK

### 2.1 What is the CEN Keymark

The CEN Keymark is the pan-European voluntary third-party certification mark, demonstrating to users and consumers that a product is in conformity with the relevant European Standard. The CEN Keymark logo is seen in figure 1.



Fig. 1: Keymark logo

The owner of the mark is CEN, the European Committee for Standardization. CEN was founded in 1961 by the national standards bodies in the European Economic Community and EFTA countries.

### 2.2 What is the Solar Keymark

The Solar Keymark is the Keymark certification scheme specifically for solar thermal collectors and systems stating conformity with the European standards:

- EN12975: Thermal solar systems and components - Solar collectors
- EN12976: Thermal solar systems and components - Factory made systems

The three main elements in the Solar Keymark certification scheme are:

- Type testing according to European standards (test samples to be sampled by independent inspector)
- Initial inspection of factory production control (quality management system at ISO 9001 level)
- Surveillance: Annual inspection of factory production control
- Biannual “surveillance test”: Detailed inspection of products

Only European certification bodies - empowered by the CEN Certification Board - have the right to issue licenses for marking the products with Keymark. However, the testing and inspection can be done by test labs and inspectors situated outside Europe. The test labs and inspectors involved must be accredited and they must have an agreement with an empowered European certification body to do the Keymark testing and inspection.

## 2.2 Why Solar Keymark

The Solar Keymark certification scheme was initiated by the European Solar Thermal industry Federation, ESTIF ([www.estif.org](http://www.estif.org)) to avoid internal European trade barriers due to different requirements in national subsidy schemes and regulations.

Before the European Standards and the Solar Keymark were established, solar thermal products had to be tested according to different national standards and certified according to different national requirements.

The Solar Keymark idea is that ONE test only and ONE certificate only are necessary to fulfill all requirements in all EU member states. This is now almost achieved - the only exceptions are:

- Spain requires also ISO 9001 certification of the factory production
- Germany requires a minimum collector performance and a RAL-UZ 73/ “Blue Angel” declaration (1), (2)
- In France Solar Keymark gives access to the national subsidy scheme, but still some house insurance companies ask for the national French CSTBat certification.

So, the Solar Keymark is now widely recognized and accepted in subsidy schemes and regulation all over Europe.

This is of course reflected in the development of number of licenses being issued. In figure 2 this development is shown.

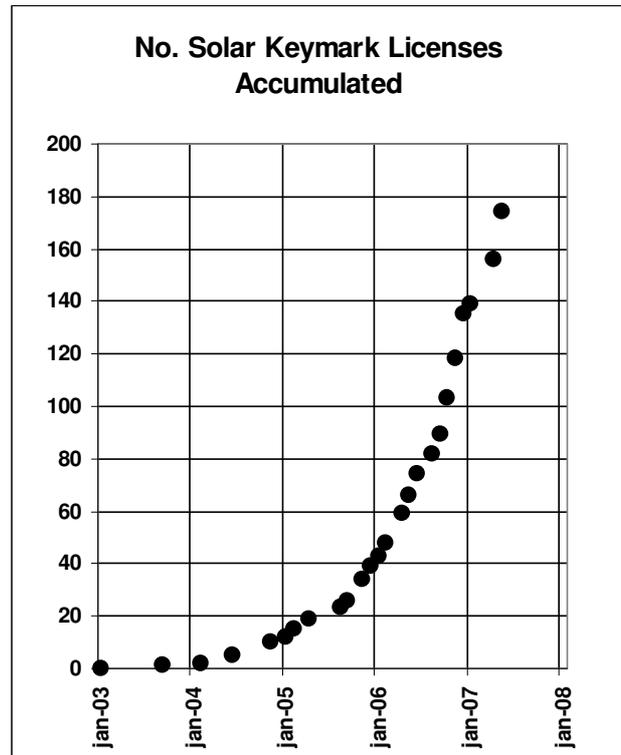


Fig.2. Accumulated number of Solar Keymark licenses

It is seen that the development recently has been almost “explosive”.

Today almost 200 Solar Keymark licenses have been issued - and now almost all main European producers show Solar Keymark on their collectors. This positive development is expected to continue, especially because next year in Germany Solar Keymark for collectors will be required for getting subsidies - so everybody who wants to sell on the biggest market in EU will go for the Solar Keymark (it is very hard to sell collectors which are not eligible for subsidy).

## 2.3 How to get a Solar Keymark

The recommended procedure for obtaining a solar Keymark license is the following:

- Check that your product (collector/system) is made to the relevant European Standard (EN12975/EN12976) - these standards are available from the national European standardization bodies, see list of CEN members at: [www.cen.eu/cenorm/members/members/index.asp](http://www.cen.eu/cenorm/members/members/index.asp).

- Check that your manufacturing methods are to suitable Quality Management System (ISO 9001 recommended but not strictly required)
- Contact empowered certification body and apply for the Solar Keymark license, see: [www.solarkeymark.org](http://www.solarkeymark.org).
- Agree with certification body which test institute and inspector to use, list of accredited test institutes, see: [www.solarkeymark.org](http://www.solarkeymark.org).
- Inspector inspects manufacturing site and quality system and takes test sample for type testing from production line or stock.
- Test institute conducts type testing on the test sample chosen by inspector
- You pay the fees for testing, inspection and certification
- If everything is OK, you will be awarded a license to mark the product with the Keymark.

The whole procedure typically takes 6-12 months.

Maintaining the Solar Keymark requires:

- Annual check of manufacturing Quality Management System documentation
- Bi-annual physical inspection of Keymarked product selected from production line or stock by inspector

Concerning Solar Keymark and OEM (Original Equipment Manufacturer): If a distributor buys Solar Keymarked collectors from the manufacturer and **sells the collectors under his own name**, a new Solar Keymark license with the new name/type must be obtained (as the collector has a new name and type, it is not possible to link it to the original Solar Keymark license). However, no testing is required to obtain the OEM Solar Keymark license, only paper work and inspection/visit.

#### 2.4 Indicative costs of Solar Keymark

Certification costs for one collector/system:

- First year costs approx. € 2000-3000
- Annual costs following years approx. € 2000

This includes CEN fee & audits/inspections but **excludes type testing costs** (testing costs are normally much more than certification costs). **The costs given here are only indicative**, exact costs depend on the certification body chosen, travel expenses for inspectors (location of production), number of collectors / system, etc..

#### 2.5 The future of Solar Keymark

At the moment it is considered whether also a Solar Keymark for solar hot water storages/tanks should be

established. The EN12977-3 “Performance testing of solar storages” is being prepared right now, and a first draft of the certification scheme rules for “solar tanks” has been made. If the Keymark for solar tanks is wanted/needed, it can be available within a year.

Germany and France have expressed a need for a Keymark valid for custom built systems (systems assembled by choosing from an assortment of components). A Keymark for custom built systems requires European Standards, EN’s, so it is now considered to establish EN’s for these kind of systems.

CE-marking of solar collectors related to Council Directive 89/106/EEC (CPD) for construction products will most probably be required in the future. The time frame for this CE-marking is rather uncertain – it could be 5-7 years. The CE-marking should be compatible with the Solar Keymark (if you already have a Solar Keymark it should be possible to declare the CE-mark).

#### 2.6 More information

More Information about Solar Keymark at:

- [www.solarkeymark.dk](http://www.solarkeymark.dk).

#### 4. ACKNOWLEDGMENTS

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