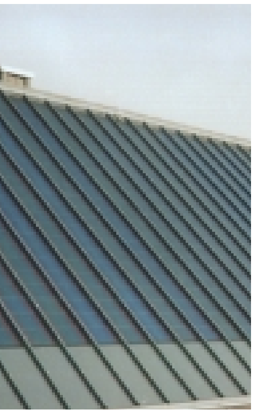
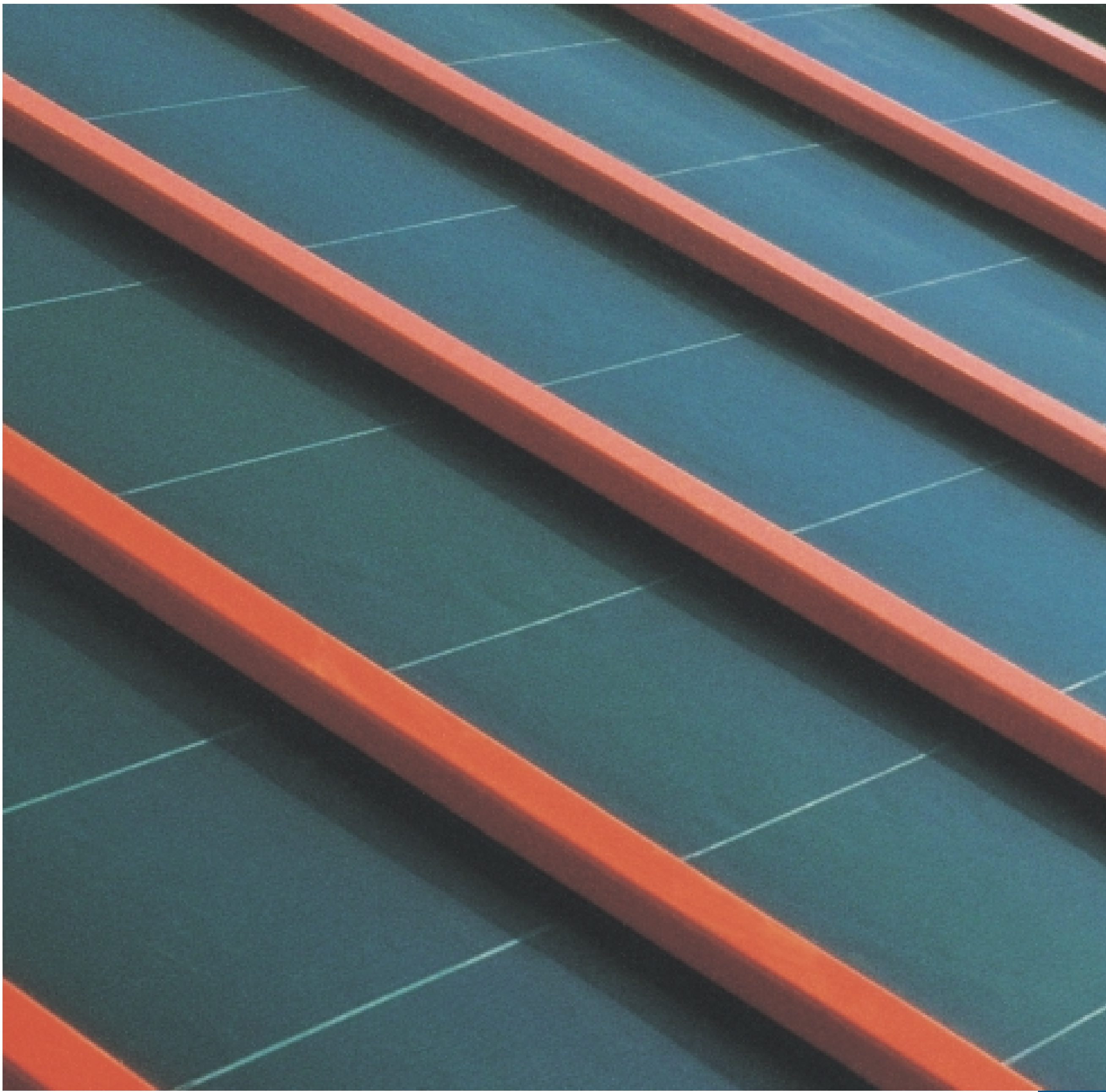
THYSSEN-Solartec®
The photovoltaic roof and façade system!

Available now in Australia from

Sustainable Building Resources Pty Ltd

Po Box 35 Macclesfield 5153 S.A. Email: sbresources@internode.on.net





A company of Thyssen Krupp Steel

Thyssen Bausysteme

ThyssenKrupp

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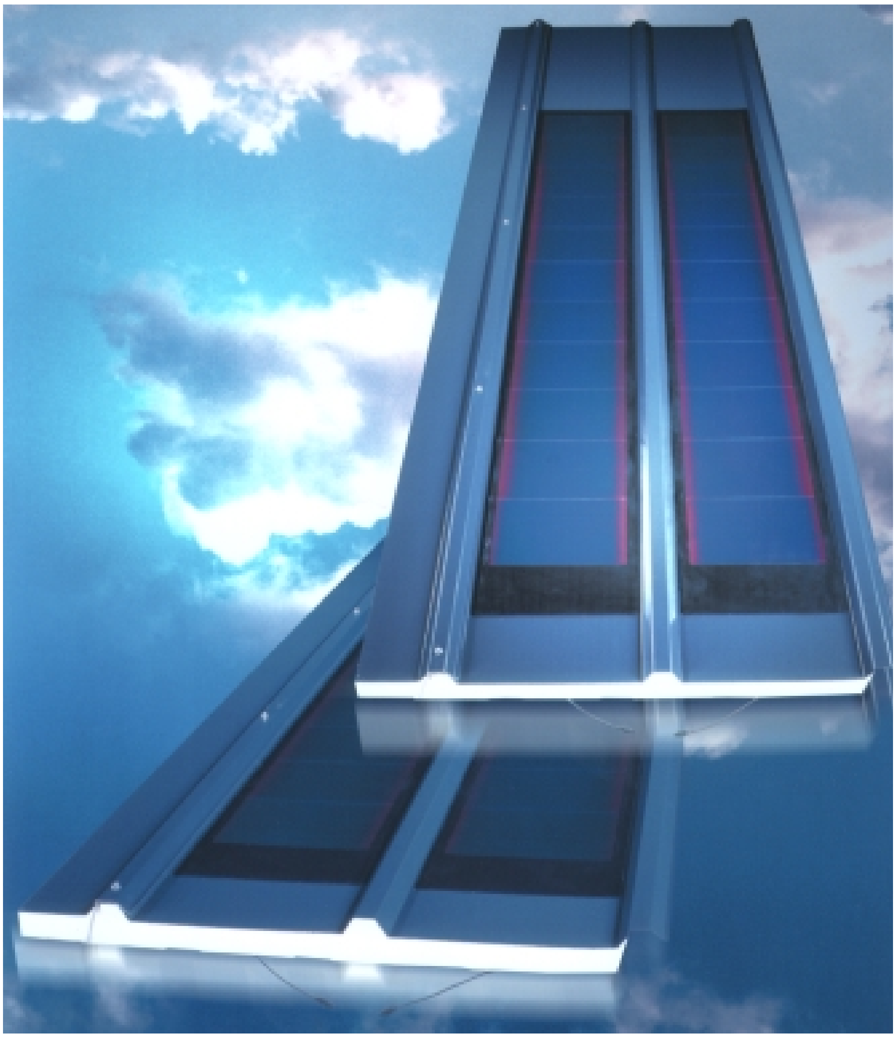
THYSSEN-Solartec®.
Building the future with solar energy.



In the future, solar technology will have a significant role to play in our energy supply. It is an indispensable form of reducing CO_2 emissions.

As a modern, high-quality system, THYSSEN-Solartec® can be used flexibly as a roof and façade system. It offers many advantages from both an ecological and an economical point of view.

The construction's innovative features and the forward-looking technology used in its manufacture make THYSSEN-Solartec® a sure long-term investment. Our modules come with a 20-year performance guarantee. Moreover, THYSSEN-Solartec® is certified in accordance with the standard IEC 61 646 and Class of Protection II.

We want solar elements to be used as simply and naturally as conventional roof and façade systems.

We want to build the future.

THYSSEN–Solartec®
Power generation with roof and façade in industrial and residential buildings…

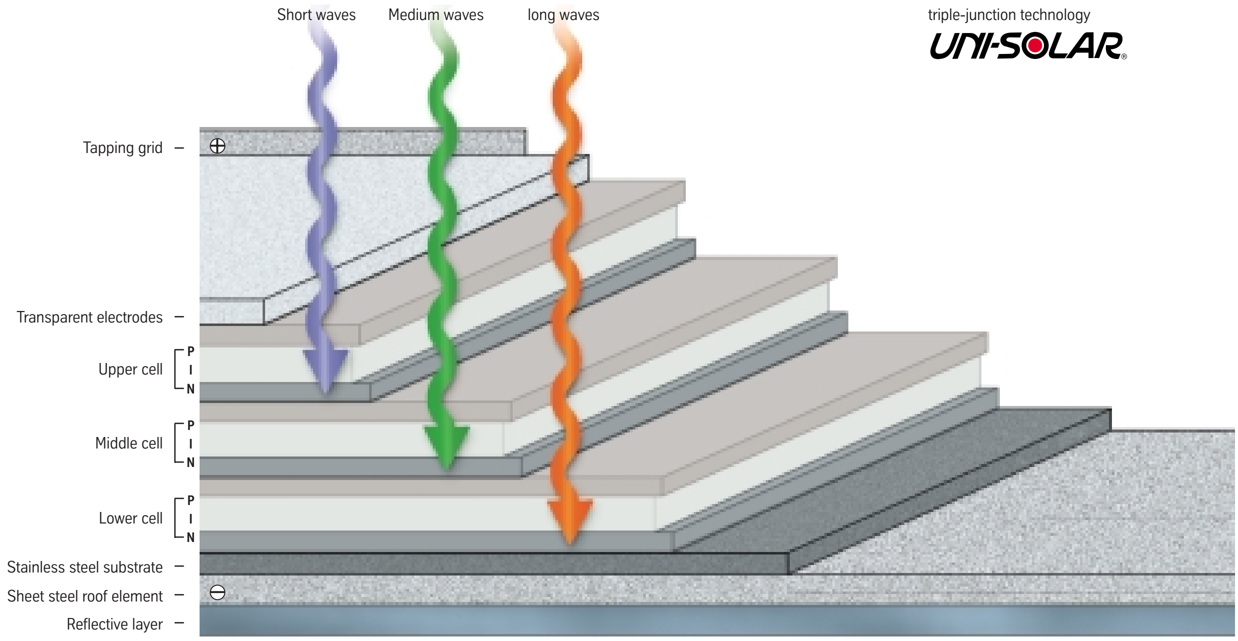
THYSSEN-Solartec® is a complete roof/ façade system made from two-sided continuously galvanized and coil-coated sheet steel with vulcanised UNISOLAR® solar film. When used in the roof, it completely replaces conventional covering. It does not require any stand-off mounting or any other expensive work. The system is also exceptionally suited for use in new buildings and roof and façade sanitation works!

THYSSEN-Solartec® can be used in the construction of housing as well as in the construction of industrial buildings. THYSSEN-Solartec® is available in two efficiency types and, depending on the model, can be fitted either vertically or horizontally.

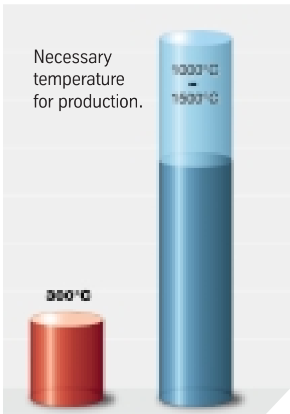
Large-format, unbreakable elements are easy to install, allow the roof to be walked upon and increase operational safety.

Furthermore, the UNISOLAR® innovative triple-junction thin film silicon technology produces around 20% more energy than conventional photovoltaic systems. In concrete terms, this means that a THYSSEN-Solartec® photovoltaic device can be dimensioned with the lower amount of approx. 4 kWp instead of 5 kWp in order to achieve the same annual output (kWh/a) as a conventional photovoltaic device. If you take into consideration the savings in the roof covering, the THYSSEN-Solartec® PV system makes ecological sense and is a presentable alternative.

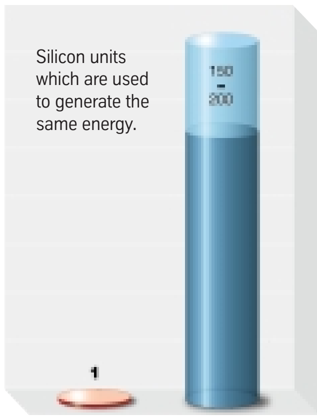
Technological progress can generate up to 20% more power!



The solar cells in the UNISOLAR®-modules consists of three series connected sub-cells, deposite on top of each other in a continous roll-to-roll deposition system. Each of these three cells converts a different part of the solar spectrum which results in excellent conversion efficiences.



Triple-junction cell technology / Crystalline construction



Triple-junction cell technology / Crystalline construction

The production of the triple-junction technology requires a lot less resources and energy that the production of crystalline cells. The modules have already generated the energy used to produce them in a matter of only 1.8 years.

- increased blue-green sensitivity of the cells, i.e. increased annual
- outputs even in the case of diffuse light conditions
- bypass diodes make it less sensitive to partial shade
- less reduction in efficiency at higher temperatures
- 20% more annual output than with conventional PV systems

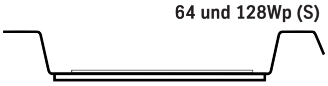
Horizontal and vertical.
Fast and safe.

THYSSEN–Solartec® style
64 and 128Wp (H)

THYSSEN–Solartec® design
64 and 128Wp (L)

THYSSEN–Solartec® trend
64 and 128Wp (T)

THYSSEN–Solartec® classic
64 und 128Wp (S)

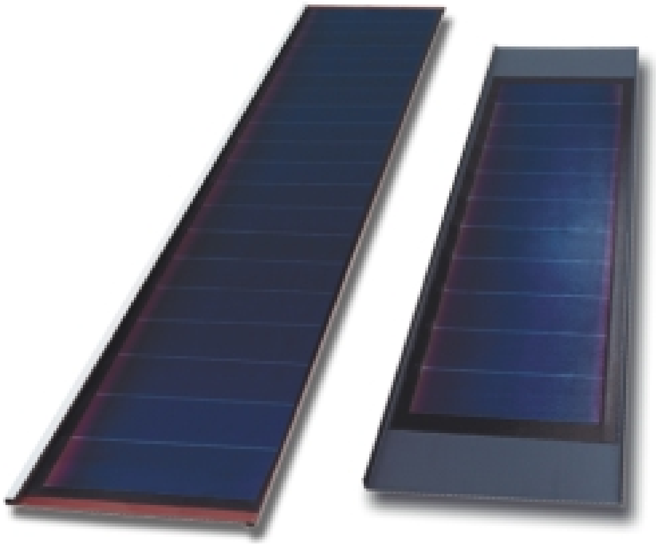


THYSSEN-Solartec® style is laid horizontally. THYSSEN-Solartec® design, trend and classic are laid vertically from the ridge to the eaves. The THYSSEN- Solartec® design's covering profiles are available in various colours. Elements without a solar layer are available for all Solartec models, such as for the side away from the sun. These are also available in various colours. The range of products is complemented by an extensive range of accessories and structural parts for the construction of connections and to extend connections.

All Solartec models are available in both 64 Wp and 128 Wp. The modules can also be used as an outer layer for large-format roof and wall constructions and also be attached to a traditional roof substructure.

The electrical connection is simply connected with two basic plug and socket connections per module during installation. The individual layered cells are already connected during the manufacturing process. The small number of the electrical connections required results in a considerably simpler installation and increases operational safety.

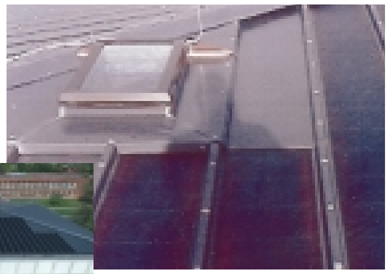
THYSSEN-Solartec®
Technical data.

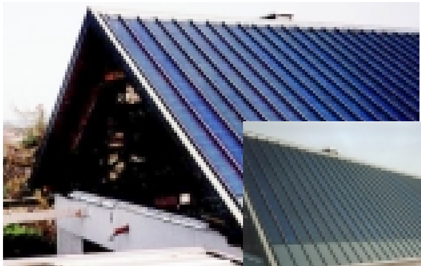


THYSSEN-Solartec® Power		style 64 Wp	128 Wp	design, trend, classic 64 Wp	128 Wp
Length of element	**[m]**	[2.90]	[5.80]	[3.05]	[5.80]
Width of construction	**[mm]**	420	420	450 (design) 455 (trend) 474 (classic)	
Weight	**[kg/m²]**	8.75	8.75	8.57	8.46
Thickness of the steel section	**[mm]**	0.75	0.75	0.75	0.75
Cell type		nanocrystalline triple-junction cell UNISOLAR®			
Maximum performance (P_{max})	**[Wp]**	64	128	64	128
Cells per module	**[piece]**	11	22	11	22
Mains voltage	**[VDC]**	12	24	12	24
Power at the point of maximum efficiency (I_{mpp})	**[A]**	3.88	3.88	3.88	3.88
Voltage at the point of maximum efficiency (U_{mpp})	**[V]**	16.5	33.0	16.5	33.0
Open-circuit voltage (U_{OC})	**[V]**	23.8	47.5	23.8	47.5
Short-circuit current (I_{SC})	**[A]**	4.8	4.8	4.8	4.8
Connection		cable with multi-contact connection			
Colours of the Steel elements		TC 7016 (RAL) charcoal or of the TC 3009 (RAL) oxide red. Other colours available on request!			

THYSSEN-Solartec®
Reference properties.

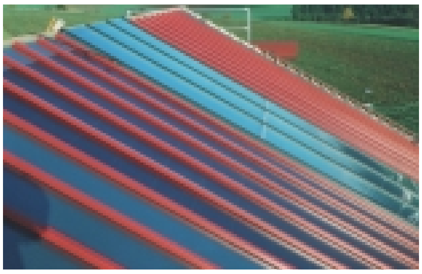
Tituskirche Hannover, 4,9 kWp,
THYSSEN-Solartec® classic 64 W und
THYSSEN-Solartec® classic 128 W



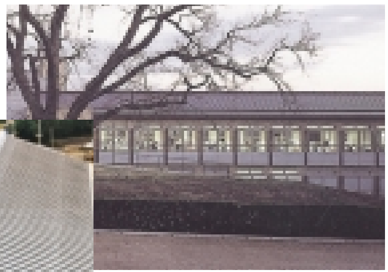


Private house Ottweiler, 4,3 kWp,
THYSSEN-Solartec® trend 128 W

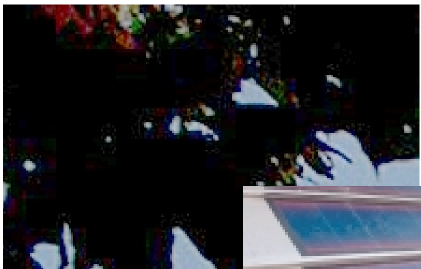
Private house Senden, 2,2 kWp,
THYSSEN-Solartec® design,
classic and trend, 32 und 64 W



Private house Lauterbach-Maar
with integrated thermal solution,
1,5 kWp, THYSSEN-Solartec® design 128 W



Canon Europe Headquarter,
London,39 kWp,
THYSSEN-Solartec®
design 128 W



Nautic Museum Stralsund
1,7 kWp, THYSSEN-Solartec® style
64 W on stainless steel

Showroom at the Hanover
exhibition centre, 2,2 kWp,
THYSSEN-Solartec® style 64 W

Sports club in Hengstetten, Freiburg,
9,5 kWp, THYSSEN-Solartec® trend 128 W

Industrial building
IBV-Oberthal, 1,5 kWp,
THYSSEN-Solartec® trend 128 W

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