SOLARUS

SUNPOWER FOR THE PEOPLE

FOSSIL FUELS ARE RUNNING OUT

AND THEY ARE HARMING OUR PLANET

One half of energy consumed globally is for heating and cooling purposes, currently provided for by fossil fuels.

The need to transition to a low carbon, and a renewable energy system comes at a time when 1.3 billion people, or 18% of the global population, live without access to electricity and 40% of the world's population rely on solid biomass fuels for cooking.

HELLO WE ARE SOLARUS. WE ARE A NEW KIND OF COMPANY

We have an important story. In fact, we have two stories to tell.
One about our values and one about the PowerCollector™.

We are an innovative renewable energy company. We develop and market the PowerCollector™.
A hybrid concentrated photovoltaic and thermal (C-PVT) collector and a C-T Thermal collector.
Our PowerCollector™ supplies clean and affordable heat and electrical energy for residential and industrial customers.

Solarus' PowerCollectors™ are capable of harnessing up to **three times** more of the available solar energy compared to conventional solar photovoltaic products on the market. This increased efficiency allows Solarus to displace more fossil fuel based energy and reduce CO_2 emissions.

AFFORDABLE ENERGY WHILE DOING GOOD FOR THE WORLD

Our promise is to create general public benefit by alleviating energy poverty.
We want to create an impact on society and the environment.

The sun offers more energy in four hours than the human race consumes in all forms in an entire year.

We do good by being good. Our vision is ‘sunpower for the people’. Solarus is a certified B Corp member and embodies the commitment to social and environmental performance, accountability, and transparency that this certification represents. Solarus seeks to deliver on the following social and environmental objectives:

SUNPOWER FOR THE PEOPLE

- Reducing energy poverty by providing access to low cost and environmentally sustainable electric and thermal energy.
- Addressing climate change by reducing global dependency on fossil fuel based energy technologies and increasing the use of low-carbon C-PVT/C-T technology.
- Reducing exposure to local air pollution in developing countries by displacing common water heating practices that rely on the burning of coal and biomass.
- Creating local employment opportunities in developing countries in sales, distribution and installation.

Certified B Corporation™

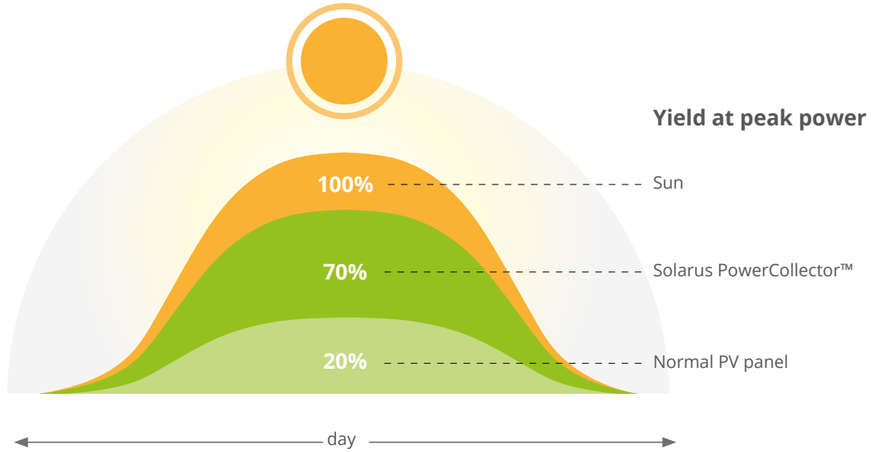
The POWER COLLECTOR™

1 PowerCollector™ generates more energy than 3 X conventional solar PV panels.

The Solarus PowerCollector™ is a concentrating, hybrid solar photovoltaic and solar thermal panel. Concentrating means that it has a curved mirror to collect and reflect more sunlight throughout the day. Hybrid means that it combines solar photovoltaic (PV) generation of electricity with solar thermal (T) generation heat.

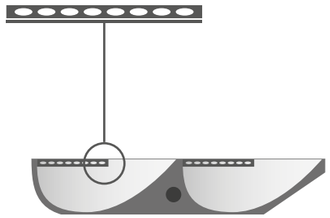
Solarus offers, as the only company in the world, both Active Cell Cooling (ACC) and MaReCo (Maximum Reflector Collector) technologies, which makes the PowerCollector™ the absolute highest performing thermal collector on the planet. Furthermore, the PowerCollector™ is the first PVT system that can be mounted in-roof.

SOLARUS POWERCOLLECTORS™ HAVE ONE OF THE HIGHEST YIELD EVER MEASURED



The use of the reflector, plus the use of concentrated solar power on the backside of the solar cells, combined with collected heat from the water/fluid cooling system of the receivers, ensures a yield which has been defined by the TÜV testing facility in Arizona as one of the highest they have ever measured.

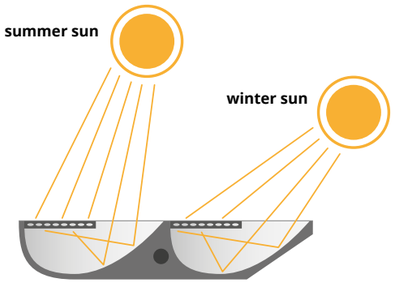
OUR CORE TECHNOLOGIES



Active Cell Cooling™

Solar PV cells become less efficient as they heat up. We want to ensure that our PV efficiency remains stable by reducing the cell temperature.

Active Cell Cooling™ (ACC™) means we use water to draw heat away from the solar PV cells. The result: improved electrical performance of up to 40% and extended cell longevity.



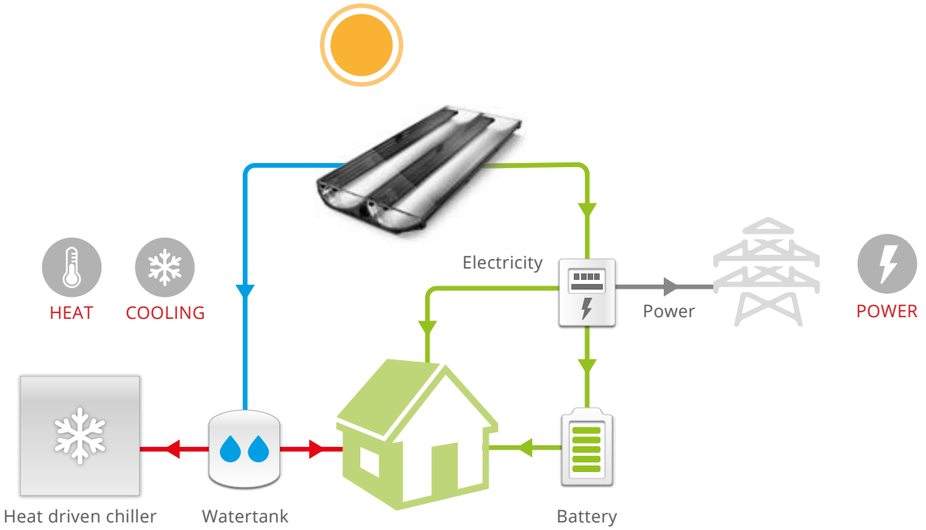
Maximum Reflector Concentration™

Maximum Reflector Concentration™ (MaReCo™) technology is our solution: a curved mirror – technically an asymmetrical parabolic trough – reflects as much concentrated sunlight onto the receiver as possible, no matter the sun's angle.

Seasonal Boost Setting

The sun traverses the sky throughout the day and provides less energy during winter. We want to maximize the amount of power collected and ensure that annual coverage is as even as possible – without the need for complicated tracking systems. Seasonal Boost Setting (SBS) enables us to customize our system according to local needs. It increases the outcome during seasons by 10 to 14%.

WHAT IT OFFERS



The PowerCollector™ provides six solutions for various applications. Today our focus is on heat, electricity and cooling. For these three solutions are currently various applications available. One of our flagship projects in Sweden is a hospital where they use our PowerCollector™ for an operation room to generate electricity, heat and cooling. We are currently working on the first prototype applications in the field of desalination. At a later stage there are also applications in the pipeline for purification and steam.

Current applications

ELECTRICITY HEAT COOLING

Near future applications

DESALINATION PURIFICATION STEAM

The POWER COLLECTOR™

C-PVT Hybrid system

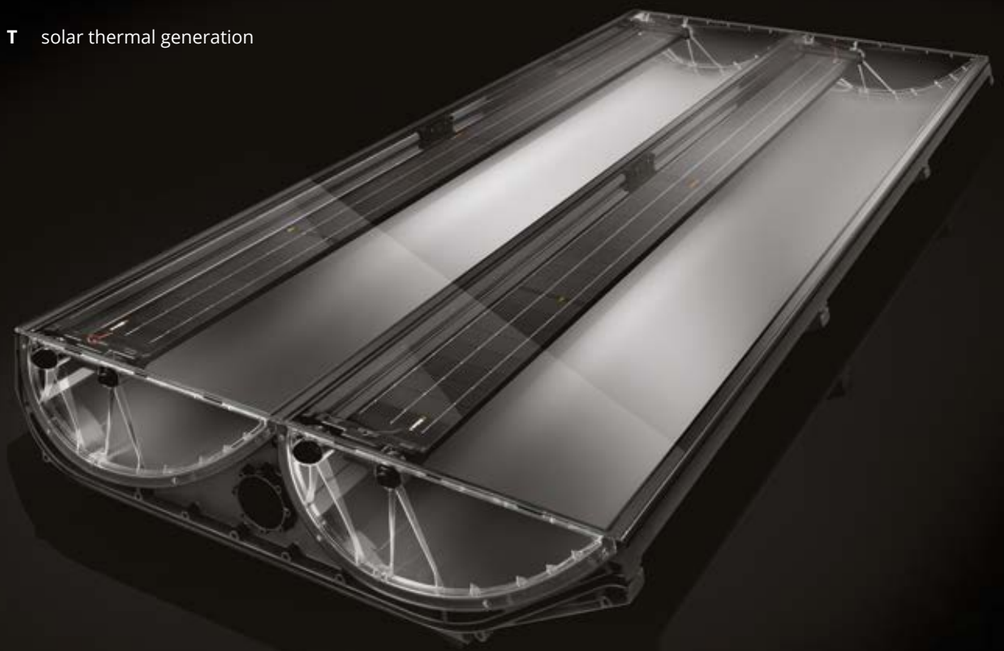
C-T Thermal system

POWER COLLECTOR C-PVT

Produces heat and electricity

PV solar photovoltaic generation

T solar thermal generation



POWER COLLECTOR C-T

SOLARUS
SUNPOWER FOR THE PEOPLE

Produces heat

T solar thermal generation

Solarus Power Collector C-PVT and C-T

General specifications C-PVT and C-T

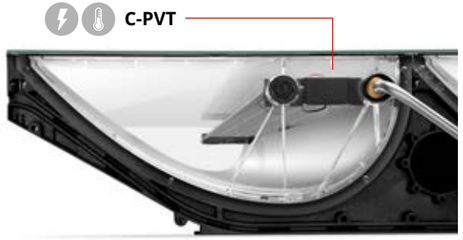
Dimension (L x W x H) :	1054 x 2443 x 241 mm
Weight :	65 KG (C-PVT)
	60 KG (C-T)
Aperture area :	2.31 m²
Gross area :	2.57 m²
Cover :	4 mm anti-reflective coated glass, super transparent, hailstone safe

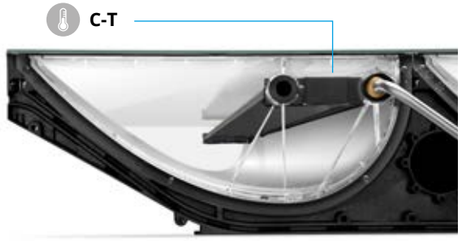
Thermal properties C-PVT and C-T

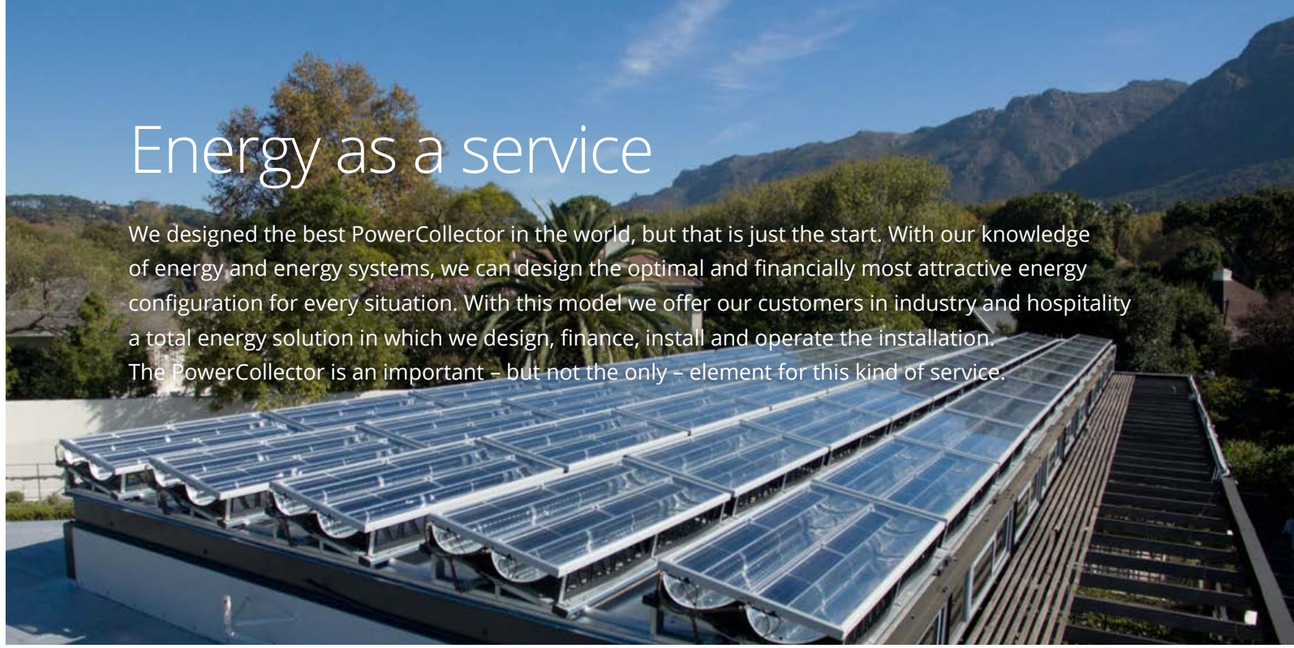
Heat Loss Coefficient :	3.47 W / m² - K
Peak Power :	1350 W (C-PVT)
	1500 W (C-T)
Capacity antifreeze :	1,4 L/module
Max working pressure :	10 bar
Stagnation Temperature :	180°C

Electrical properties per side C-PVT

Number of Cells :	152
Cell dimension :	52 x 156 x 0,2 mm
Peak Electrical Power :	270 W_P ± 5%







Energy as a service

We designed the best PowerCollector in the world, but that is just the start. With our knowledge of energy and energy systems, we can design the optimal and financially most attractive energy configuration for every situation. With this model we offer our customers in industry and hospitality a total energy solution in which we design, finance, install and operate the installation. The PowerCollector is an important – but not the only – element for this kind of service.

TOGETHER WE DISCOVER THE POTENTIAL

Get acquainted
- Get to know each other
- Understand the business and energy demand
- Obtain an understanding of the potential benefits

Find the numbers
Find historical data like:
- Heat and electricity demand
- Current energy prices
- National or local incentives

Define the potential
- Model the current energy-system to design a future installation
- Develop a business case based on investment, savings and renewable energy produced
- Calculate direct and indirect cost savings as well as CO2 reduction

Understand the value
- Understand the proposition and the value delivered
- Decide upon contractual model (buy <> lease)
- Agree upon the next steps and responsibilities
- Sign contract

Install & Operate
- Order equipment
- Install installation
- Start saving energy and delivering renewable energy
- Start cost savings!

In Sweden,
the sun provides heating, cooling and electricity
for the hospital's operating rooms

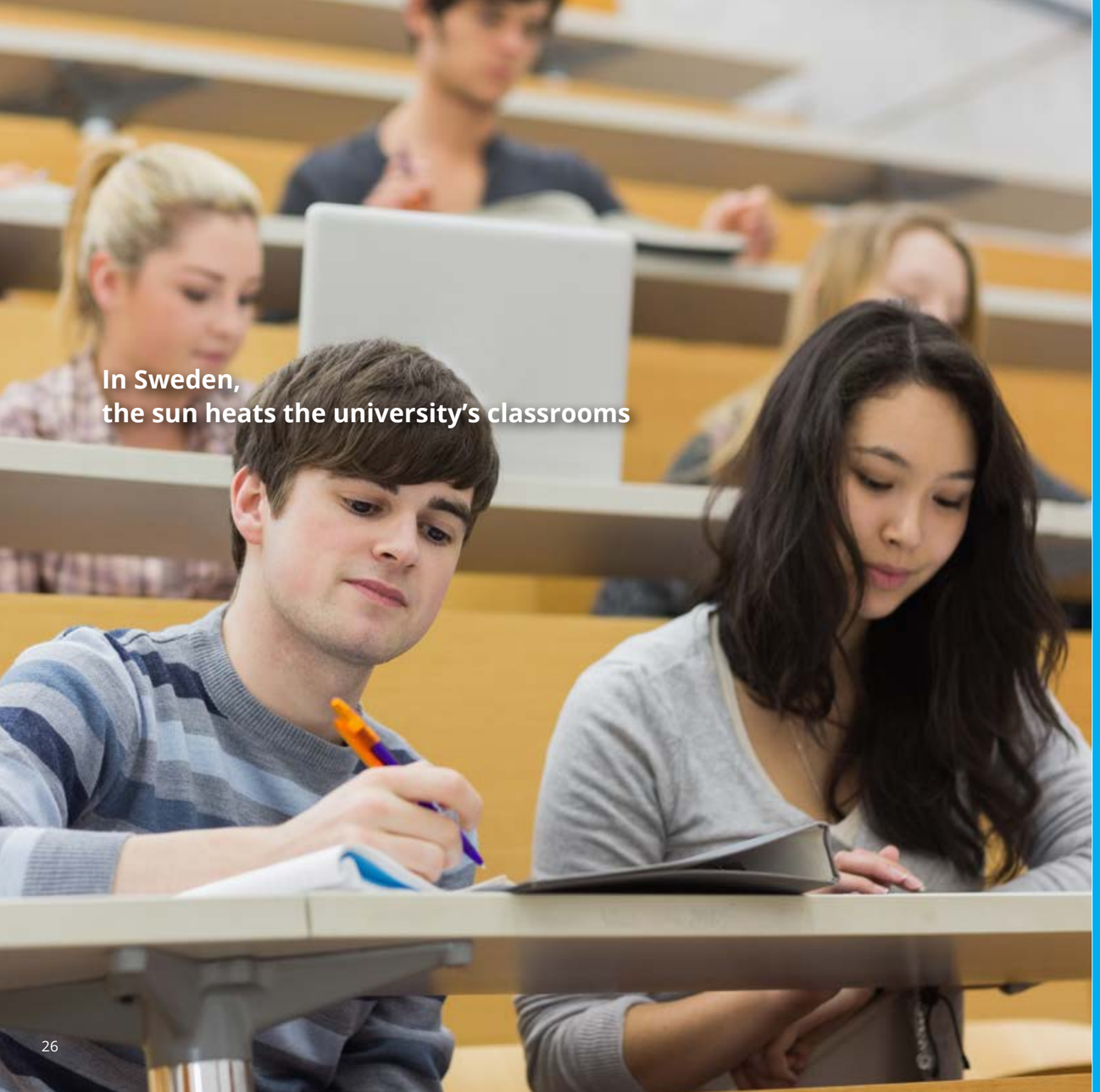
In South Africa,
the sun bakes his bread

In France,
the sun keeps products in supermarkets fresh

**In the Netherlands,
the sun heats their swimming pool**

In the Auroville Temple in India,
the sun cooks more than 1000 meals a day

In Switzerland,
the sun heats the showers



THE NEW POWER TO FUEL OUR FUTURE

Area in the Sahara that would need to be covered to fuel Europe (EU-25) and the entire world.

Normal PV panels

PowerCollectors™

THE GLOBAL GOALS
For Sustainable Development

Solarus exists within a global context. By aligning our promise with the United Nations Sustainable Development Goals, we are sure to succeed. There are 17 goals, here are the six we hope to directly address.

Goal one: end poverty in all its forms everywhere

Fundamental to Solarus' market approach is the objective of promoting local employment opportunities in developing countries for those who need it most.

Goal seven: ensure access to affordable, reliable, sustainable and modern energy for all

With a conversion efficiency of 70% (combined heat and electricity), Solarus stands out as a clear industry leader in support of this goal.

Goal eight: promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all

Renewable energy is a global growth industry with immense untapped potential. Through our training, low- or unskilled individuals will become sought-after professionals.

Goal nine: Build resilient infrastructure, promote inclusive and sustainable industrialisation, and foster innovation

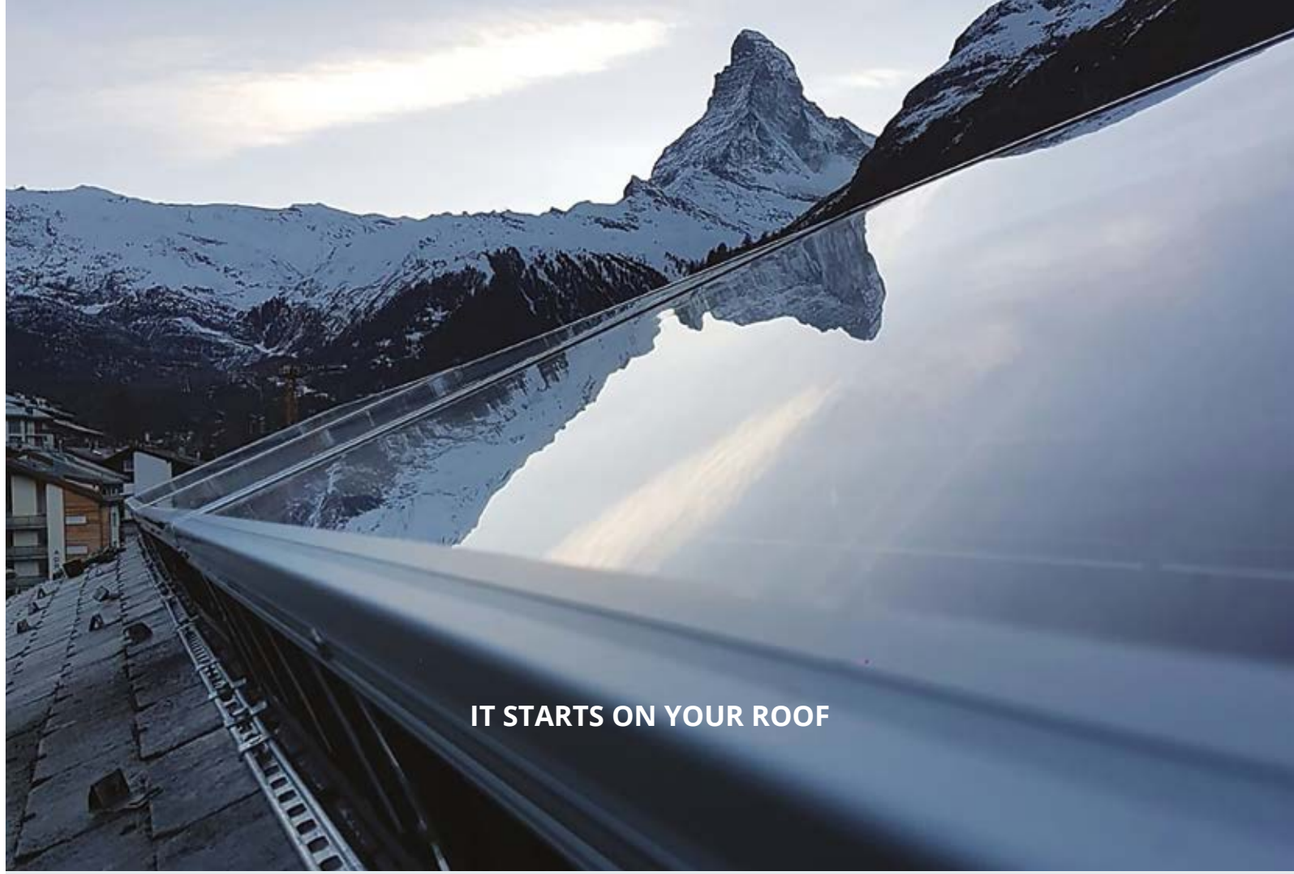
The renewable energy products Solarus markets are the result of extensive research and development. This is sustainable innovation in its truest sense.

Goal ten: reduce inequality within and among countries

Energy poverty remains an intrinsic component of inequality – both material and social. By providing affordable, grid-independent energy and employment opportunities, we work to uplift individuals and communities.

Goal thirteen: take urgent action to combat climate change and its impacts

The global trend of populations transitioning from rural to urban lifestyles is most pronounced in the developing world. By providing a clean, renewable alternative energy source Solarus is actively diverting their burgeoning energy demand from greenhouse gas-intensive sources and thereby helping to combat climate change.



Join the global energy transition and save the world.
Call us on +31 (0)77 30 209 88 or send an e-mail to jacqueline@solarus.com
and we'll help you fuel *your* future.

Certified B Corporation™

SOLARUS

www.solarus.com

Winner of the **Accenture Innovation Award** for Clean & Affordable Energy

Solarus was awarded for being the best in show presenting company

Solarus has successfully accomplished **STING** extensive support programme for accelarating businesses

Miljöpris - Award given by the Social Democrat party (from the city of Norrtelja)

The BLUE Economy
Solarus is a Blue Economy Company

Solarus was recognized as one of the 33 hottest technical innovation start-ups in Sweden. Award given by two newspapers: **NewTeknik** (technical) and **Äffars Världen** (bussiness)

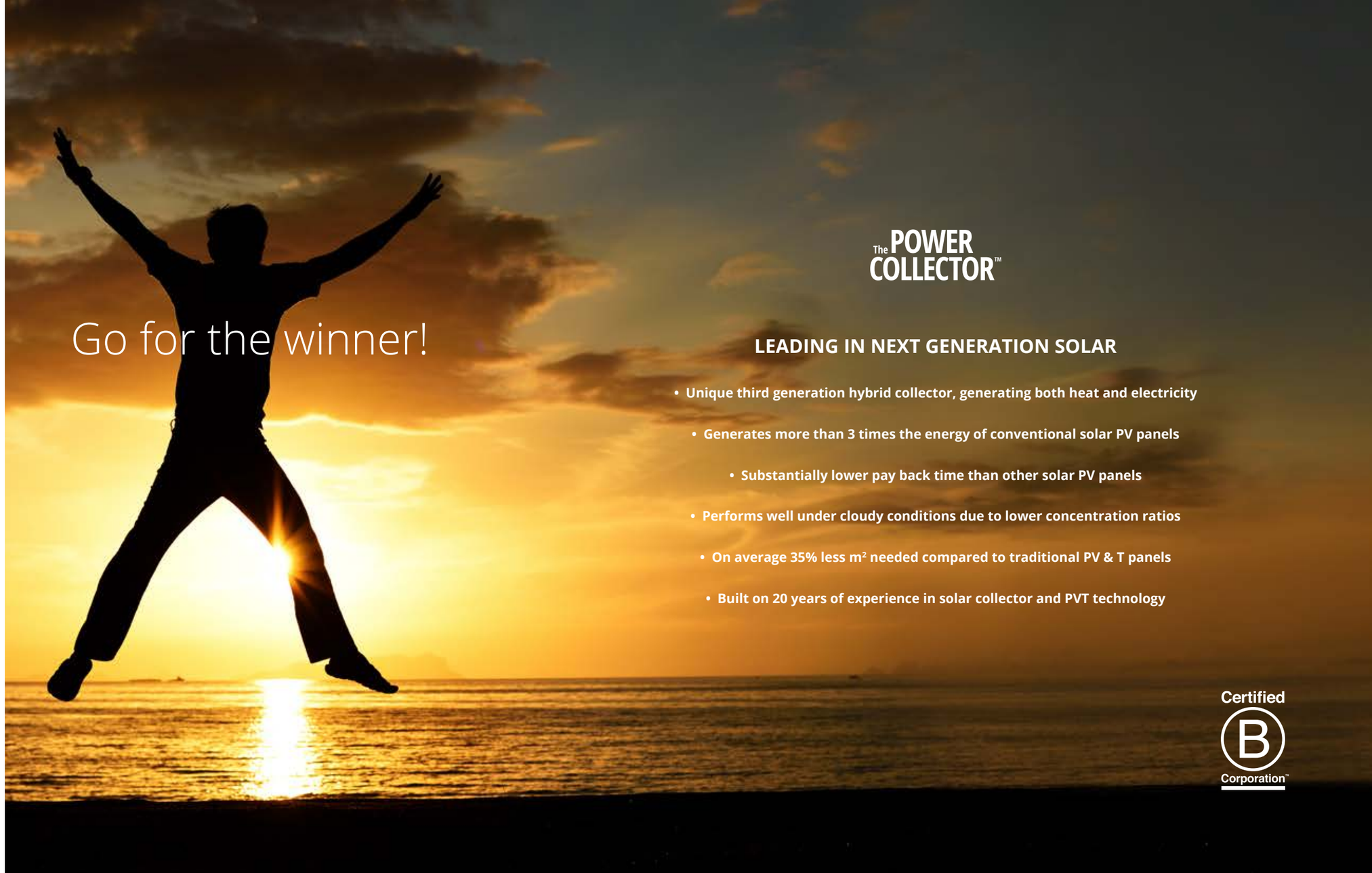
Solarus is case 53 out of 100 world wide disruptive technologies selected by **ZERI**

Världsklassavtal - Solarus was certified being part of making the Norra Njurgårdsstaden district (part of the city of Stockholm) into an environmental world class city

International Youth - Solarus won the Beijing´s International Innovation Competition

Solarus won the award for start-ups during the 'Meet the Giants' event at Hannover Messe

Solarus won the award for 'best TNO' match during the 'Meet the Giants' event at Hannover Messe



The POWER COLLECTOR™

LEADING IN NEXT GENERATION SOLAR

- **Unique third generation hybrid collector, generating both heat and electricity**
- **Generates more than 3 times the energy of conventional solar PV panels**
- **Substantially lower pay back time than other solar PV panels**
- **Performs well under cloudy conditions due to lower concentration ratios**
- **On average 35% less m² needed compared to traditional PV & T panels**
- **Built on 20 years of experience in solar collector and PVT technology**

Certified B Corporation™

SOLARUS

This brochure has an FSC® Mix label

Concept & design by Rethinking Group 2018-03

Venlo – The Netherlands
Head Office
Newtonweg 20
5928 PN Venlo
+31 (0)77 30 209 88
jacqueline@solarus.com

Gävle – Sweden
Research & Development
Nobelvägen 2
Gävle
+46 (0)26-82000
joao@solarus.com

South Africa
Sales Office
+27 (0)84 584 6710
henning@solarus.com