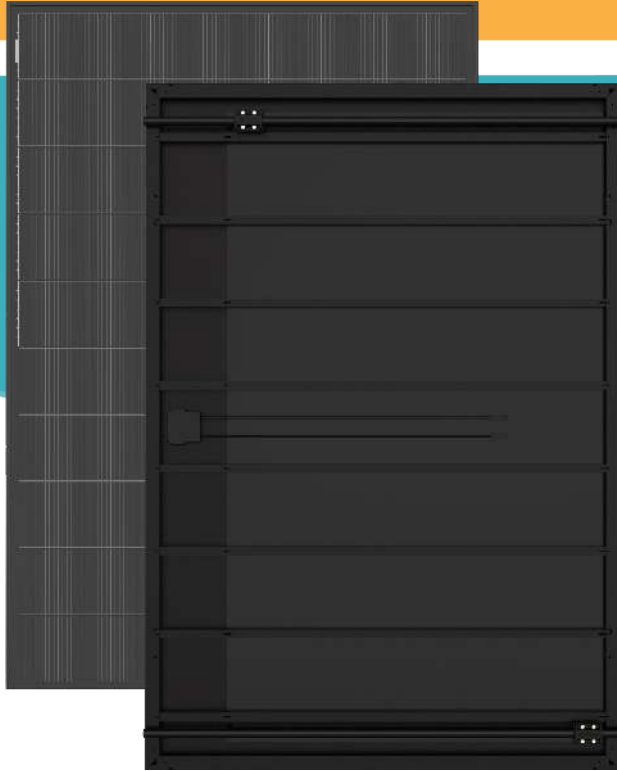


SPRING hybrid solar panel (PVT)<sup>®</sup> designed and manufactured in France (certified Made in France), produces both electricity and hot water

## SPRING<sup>®</sup> 375 Shingle Black



### PHOTOVOLTAIC FRONT FACE



- High performance monocrystalline cells cooled by water circulation
- Positive classification -0/+5 Wp
- Anti-reflective glass ensuring high performance even in diffused light

### THERMAL REAR FACE

Hot water production thanks to an ultra-thin patented heat exchanger completely integrated into the panel



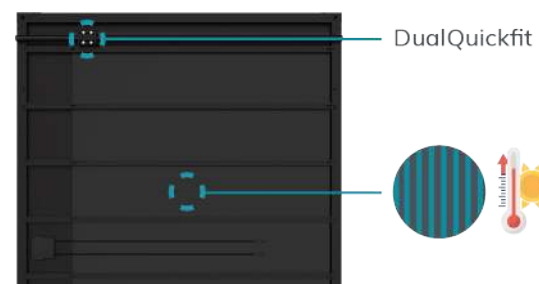
**DualBoost<sup>®</sup>** : Photovoltaic efficiency boost by cooling cells

### WARRANTY



Product and labor warranty\* 10 years  
25-year linear power output warranty

\* Refer to the DualSun warranty conditions



### QUALITY & SAFETY



- CE marking
- IEC 61215 & 61730 in progress
- SOLARK KEYMARK in progress
- CEC listed / UL 1703 in progress / ICC-SRCC in progress

### DUALQUICKFIT<sup>®</sup>

Patented Plug & Play hydraulic connection system for faster and more reliable installation of the SPRING<sup>®</sup> panel



### INDUSTRY OF THE FUTURE LABEL

Engineered in France :  
R&D center in Marseille

Made in France (certificate FR-IMF-2019-198):  
DIN EN ISO 9001: 2015 certified factory in Jujurieux



### COMPATIBLE PANEL FOR APPLICATIONS:

DHW



HP

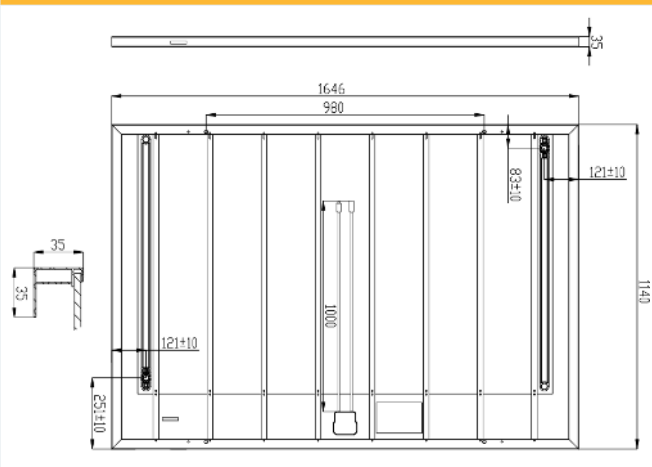


POOL





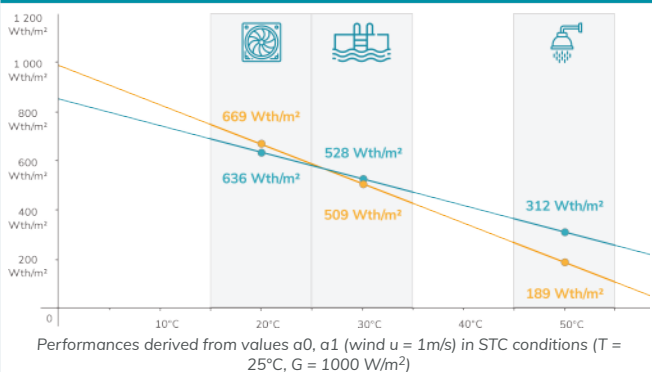
## Dimensions



## Physical characteristics

Length	1646 mm	
Width	1140 mm	
Thickness	35 mm	
	<b>Non insulated</b>	<b>Insulated</b>
Empty / full weight	26,3 / 31,3 kg	27,1 / 32,1 kg
Number of cells	360	
Cell type	PERC Monocrystalline	
Connectors	MC4 / MC4 compatible	
Cable length	1000 mm	
Maximum load	5400 Pa (snow) / 2400 Pa (wind)	
Frame / Backsheet	Black anodised aluminium / Black	

## Thermal power output as a function of the temperature of the water in the panel and by application



## Photovoltaic characteristics

Nominal power	375 W
Output power tolerance	0 / +5W
Module efficiency	20 %
Rated voltage ( $V_{mpp}$ )	40,40 V
Rated current ( $I_{mpp}$ )	9,28 A
Open circuit voltage ( $V_{oc}$ )	48,90 V
Short-circuit current ( $I_{sc}$ )	9,89 A
Voltage temperature coefficient ( $\mu V_{oc}$ )	-0,27 %/°K
Current temperature coefficient ( $\mu I_{sc}$ )	0,04 %/°K
Power temperature coefficient ( $\mu P_{mpp}$ )	-0,34 %/°K
Maximum system voltage	1500 VDC
Maximum reverse current	20 A
NMOT	42,3 +/- 2°C
Application class	Class II

\* STC conditions (AM 1.5 - 1000 W/m<sup>2</sup> - 25°C)  
Measurement tolerance: +/- 3%

## Thermal characteristics

Thermal power	629 W <sub>th</sub> /m <sup>2</sup> *	
Heat exchanger area	1,635 m <sup>2</sup>	
Heat exchanger volume	5 L	
Max operating pressure	1,5 bar	
Pressure drop	<b>Portrait</b>	<b>Landscape</b>
(Pa   mmH2O)	at 60 L/h 186   19	441   45
	at 100 L/h 461   47	961   98
Hydraulic inlet / outlet	DualQuickfit® fitting	
	<b>Non insulated</b>	<b>Insulated</b>
Stagnation temperature	70°C	75,6°C
Optical efficiency $a_0$	58,9 %**	58,2 %**
Coefficient $a_1$	16,0 W/K/m <sup>2</sup> **	10,8 W/K/m <sup>2</sup> **
Coefficient $a_2$	0 W/(m <sup>2</sup> .K <sup>2</sup> )**	0 W/(m <sup>2</sup> .K <sup>2</sup> )**

\* Thermal power calculated with wind  $u = 0 \text{ m/s}$ ,  $DT = 0$ ,  $G = 1000 \text{ W/m}^2$   
\*\* The coefficients  $a_0$ ,  $a_1$  and  $a_2$  result from EN 9806: 2017 certification tests for solar collectors without glazing carried out by KIWA for a wind speed  $u = 1 \text{ m/s}$ :  $a_0 = n_0 - c_6 * u'$ ;  $a_1 = c_1 + c_3 * u'$ ;  $u' = u - 3$

Find the installation instructions and mounting systems in our resource area:

