

OG-100 ICC-SRCC™ CERTIFIED SOLAR COLLECTOR # 10002057



Supplier:
TVP Solar
 Rue du Pré-de-la-Fontaine 10
 Satigny Business Park
 Satigny, GENEVA 1242 Switzerland
 Reference Standard:
ICC 901/SRCC Standard 100-2015

Brand: MT-Power
 Model: v4
 Collector Type: Glazed Flat Plate
 Certification #: 10002057
 Original Certification: November 14, 2017
 Renewal Expiration Date: November 01, 2021
 Certifications must be renewed annually.

This solar collector has been evaluated and certified by the Solar Rating & Certification Corporation™ (ICC-SRCC™), an ISO/IEC 17065 accredited and EPA recognized Certification Body, in accordance with the SRCC OG-100 Certification Program, as defined in SRCC OG-100, Operating Guidelines and Minimum Standards for Certifying Solar Collectors. This award of certification is subject to all terms and conditions of the current OG-100 Program Agreement and the documents incorporated therein by reference. This document must be reproduced in its entirety.

COLLECTOR THERMAL PERFORMANCE RATINGS							
Kilowatt-hours (thermal) Per Panel Per Day				Thousands of Btu Per Panel Per Day			
Climate -> Category (Ti-Ta)	High Radiation (6.3 kWh/m².day)	Medium Radiation (4.7 kWh/m².day)	Low Radiation (3.1 kWh/m².day)	Climate -> Category (Ti-Ta)	High Radiation (2000 Btu/ft².day)	Medium Radiation (1500 Btu/ft².day)	Low Radiation (1000 Btu/ft².day)
A (-5 °C)	8.6	6.4	4.2	A (-9 °F)	29.2	21.8	14.5
B (5 °C)	8.4	6.3	4.1	B (9 °F)	28.8	21.4	14.1
C (20 °C)	8.2	6.0	3.9	C (36 °F)	28.0	20.6	13.3
D (50 °C)	7.6	5.4	3.3	D (90 °F)	25.8	18.5	11.1
E (80 °C)	6.7	4.6	2.6	E (144 °F)	22.9	15.8	9.0

A- Pool Heating (Warm Climate) B- Pool Heating (Cool Climate) C- Water Heating (Warm Climate) D- Space & Water Heating (Cool Climate) E- Commercial Hot Water & Cooling

TECHNICAL RESULTS				Tested in accordance with: ISO 9806:2013			
ISO Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]							
SI UNITS:	$\eta = 0.729 - 0.55610(P/G) - 0.00610(P^2/G)$			Y Intercept:	0.745	Slope:	-1.455 W/m².°C
IP UNITS:	$\eta = 0.729 - 0.09801(P/G) - 0.00060(P^2/G)$			Y Intercept:	0.745	Slope:	-0.256 Btu/hr.ft².°F
Incident Angle Modifier							
θ	10°	20°	30°	40°	50°	60°	70°
K _r	1.00	0.99	0.99	0.97	0.94	0.88	0.71
Impact Safety Rating: 2							

COLLECTOR SPECIFICATIONS					
Gross Area:	1.960 m²	21.10 ft²	Dry Weight:	53.0 kg	116.8 lb
Net Aperture Area:	1.830 m²	19.70 ft²	Fluid Capacity:	1.4 liter	0.4 gal
REMARKS:					

Shawn Martin

Technical Director

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Please verify certification is active on the SRCC website www.solar-rating.org.
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ADDITIONAL INFORMATION ([click here to return to the rating page](#))

COLLECTOR TESTING INFORMATION

Test Lab:	Forschungs- und Testzentrum für Solaranlagen (TZS) am Institut für Thermodynamik und Wärmetechnik (ITW) der Universität Stuttgart	Test Date:	May 24, 2017		
Test Report Number:	16COL1343	Test Location:	indoors		
Test Fluid:	Water				
Test Mass Flow Rate:	0.0200 kg/(s m²)	14.75 lb/(hr ft²)	Test Pressure:	0 kPa	0 psi

SOLAR COLLECTOR CONSTRUCTION DETAILS

Gross Length:	0.975 m	Gross Width:	2.015 m	Gross Depth:	51.000 mm
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COLLECTOR MATERIALS

Outer Cover:	Glass sheet	Enclosure back:	Stainless Steel	Back Insulation:	Vacuum, Vacuum
Inner Cover:	Glass sheet	Enclosure side:	Stainless Steel	Side Insulation:	Vacuum, None
Absorber Description:	Tubes connected to Single Sheet		Flow Pattern:	Mixed	
Riser Tube:	Copper		Fin:	Aluminum	
Absorber Coating:	Selective		Tube to fin connection	Laser Weld	

GLAZING	Outer Cover	Inner Cover
Material:	Glass sheet	Glass sheet
Surface Characteristics:	Smooth	Smooth
Thickness:	5.0 mm	0.0 mm
Transmissivity:	High (equal to or greater than 90%)	High (equal to or greater than 90%)
Length:	2.000 m	2.000 m
Width:	0.960 m	0.960 m
Tube Glazing to Header Enclosure Seal:	Other	



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ABSORBER:		Absorber Coating:		Selective	
Header Material:	Stainless Steel	Header OD:	0.0 mm	Header Wall:	0.0 mm
Riser Tube Material:	Copper	Riser Tube OD:	12.0 mm	Riser Tube Wall Thickness:	0.5 mm
Fin Material:	Aluminum	Fin Thickness:	0.60 mm		
Flow Pattern:	Mixed				
Number of Riser Tubes:	6	Tube Spacing:	180.0 mm	Number of times each riser crosses the absorber:	1
Length of Flow Path:	2.20 m	Riser to Fin/Plate Bond:	Laser Weld		

INSULATION:					
Location	Type	Thickness	Location	Type	Thickness
Back – Top Layer:	Vacuum	25.0 mm	Sides – Inner Layer:	Vacuum	52.0 mm
Back – Bottom Layer:	Vacuum	25.0 mm	Sides – Outer Layer:	None	
Enclosure Fastening Methods:	Weld				

Power Output per Collector(W) [Ti-Ta, G = 1000 W/m ²]				
0	10	30	50	70
1429	1418	1397	1375	1352



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PRESSURE DROP				
Flow	ΔP		Flow	ΔP
ml/s	Pa		gpm	in H₂O
20	1885		0.32	7.6
50	11758		0.79	47.3
80	30087		1.27	121.1



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ICC-SRCC OG-100 Certification Label

The collectors listed in this certification must display the label below.
The certification label must be permanently affixed to each collector in accordance with SRCC OG-100 program requirements.

