



SUMMARY INFORMATION SHEET

FSEC # 00617

Certification Date: 23-SEP-13

MANUFACTURER

Company Aquatherm Industries, Inc.
Address 1940 Rutgers University Blvd. Lakewood, NJ 08701 USA

Collector Model
Ecosun 16104-12

This solar collector was evaluated by the Florida Solar Energy Center (FSEC) in accordance with prescribed methods and was found to meet the minimum standards established by FSEC. This evaluation was based on solar collector tests performed by an FSEC approved laboratory. The purpose of the tests is to verify initial performance conditions and quality of construction only. The resulting certification is not a guarantee of long term performance or durability.

DESCRIPTION

Gross Length	3.653 meters	11.98 feet
Gross Width	1.274 meters	4.18 feet
Gross Depth	.009 meters	.03 feet
Gross Area	4.332 square meters	46.63 square feet
Transparent Frontal Area	4.332 square meters	46.63 square feet
Volumetric Capacity	13.4 liters	3.5 gallons
Weight (empty)	9 kilograms	20 pounds
Test Pressure	241 kPa	35 Psig
Number of Cover Plate	0	

MATERIALS

Enclosure	None
Glazing	None
Absorber	Polypropylene with UV stabilization
Absorber Coating	None
Insulation	None

THERMAL PERFORMANCE

Test flow Rate 330 ml/s 5.23 gpm

Incident Angle Modifier $K_{\tau\alpha} = 1 - .13 \text{ Linear Fit}$

Efficiency Equation [NOTE: Based on gross area and (P)=Ti-Ta]	Y INTERCEPT	SLOPE
S I UNITS: $\eta = 0.935 - 8.93000 (P)/I - 0.64660 (P)^2/I$	0.918	-21.95 W/m ² .°C
I P UNITS: $\eta = 0.935 - 1.57300 (P)/I - 0.06330 (P)^2/I$	0.918	-3.90 Btu/hr.ft ² .°F

RATING

This collector has been rated for energy output on measured performance and an assumed standard day. Total solar energy available for the standard day is 5045 Watt-hour/m² (1600 Btu/ft²) distributed over a 10 hour period.

Output energy ratings for this collector based on the second-order efficiency curve are:

Collector Temperature	ENERGY OUTPUT
Low 35 °C (95 °F)	15.1 kWh/day 51500 Btu/day
Intermediate 50 °C (122 °F)	4.99 kWh/day 17000 Btu/day
High 100 °C (212 °F)	0 kWh/day 0 Btu/day

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