

EnerWorks

Commercial Solar Collectors and Solar Energy Units

*Integrated, energy-saving,
turn-key solutions*

EnerWorks designs and manufactures solar heating equipment and solar collectors for commercial use. EnerWorks' pre-engineered thermal solutions can be integrated into new construction or retrofitted to existing structures. A solar thermal system is an effective and economical way to provide hot water and heat for commercial applications. EnerWorks' commercial solar heating solutions save money and contribute to a healthier environment.



PRODUCT FEATURES

- High-Performance Solar Collectors in repeatable 10-collector modules
- Commercial-scale Solar Energy Units in three sizes, supporting 20-120 collectors (40 to 300 kW_{th}; 135,000 to 1,000,000 BTU/hr)
- Pre-engineered solar water heating solutions for new or retrofit construction

APPLICATIONS

- Hospitals, term-care and assisted-living facilities
- Hotels
- Multi-family accommodation
- Community centers, particularly with pools
- Small commercial, including car washes, laundries, restaurants and salons
- Industrial processes
- Government buildings

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Commercial Solar Collectors and Solar Energy Units

EnerWorks High Performance Commercial Solar Collectors Achieve Top SRCC OG-100 Ratings*

Solar Rating & Certification Corporation (SRCC) Thermal Performance Rating

			SRCC Thermal Performance Rating Warm Climate - Clear Day		
Company	Model	Type	1000 Btu/collector/day	Btu/ft ² /day*	kWh _{th} /m ² /day*
EnerWorks **	Commercial Collector	Flat-Plate	37	1196	3.8
Heliodyne	Gobi 408	Flat-Plate	37	1147	3.6
Viessmann	Vitosol 100 SV1, SH1	Flat-Plate	34	1105	3.4
Schuco USA	Premium V, H, LA	Flat-Plate	32	1067	3.4
Sun Earth	Empire IC-32	Flat-Plate	31	1032	3.3
King Solar (AET)	KS-32	Flat-Plate	30	1003	3.1
Viessmann	Vitosol 300 Type SP3, 2m2	Tubular	26	839	2.7
Apricus	AP-22	Tubular	26	810	2.5
Thermomax	Solamax AST20	Tubular	23	750	2.3

Solar Rating & Certification Corporation (SRCC) Thermal Performance Rating

			SRCC Thermal Performance Rating Cold Climate - Clear Day		
Company	Model	Type	1000 Btu/collector/day	Btu/ft ² /day*	kWh _{th} /m ² /day*
EnerWorks **	Commercial Collector	Flat-Plate	25	808	2.6
Heliodyne	Gobi 408	Flat-Plate	23	713	2.2
Viessmann	Vitosol 100 SV1, SH1	Flat-Plate	23	810	2.5
Schuco USA	Premium V, H, LA	Flat-Plate	19	688	2.2
Sun Earth	Empire IC-32	Flat-Plate	20	698	2.2
King Solar (AET)	KS-32	Flat-Plate	22	595	1.9
Viessmann	Vitosol 300 Type SP3, 2m2	Tubular	23	742	2.4
Apricus	AP-22	Tubular	22	685	2.2
Thermomax	Solamax AST20	Tubular	16	522	1.6

Reference: *Solar Rating and Certification Corporation, www.solar-rating.org October 2007

Based on gross area

Comparison collector selection based on similar net aperture area

** EnerWorks collectors certified with 50% solution of propylene glycol

EnerWorks Commercial Solar Collectors

For commercial applications requiring water temperatures between 104°F to 158°F (40°C - 70°C) and daily volumes between 105 - 20,000 US gallons (400 liters - 75 000 liters), solutions can be customized to target temperatures up to 220° F (140° C). Commercial users requiring warm air may use the energy via a standard fin-fan coil unit (water-to-air heat exchanger with fan). Process fluids can be heated using fluid-to-fluid heat exchangers.

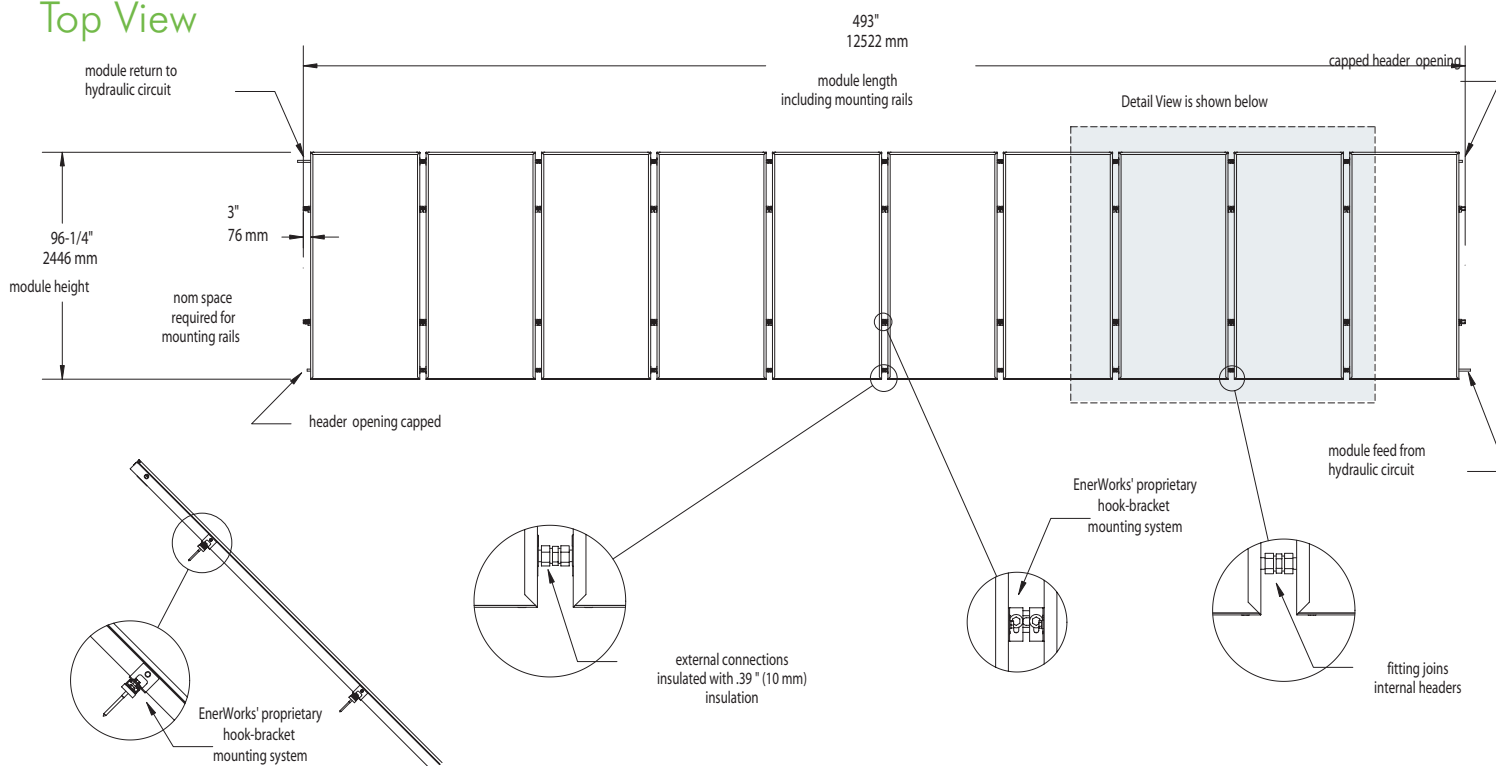
SOLAR COLLECTOR MODULES

Up to 10 Collectors: Internal Headers, Hook-Bracket Mounting



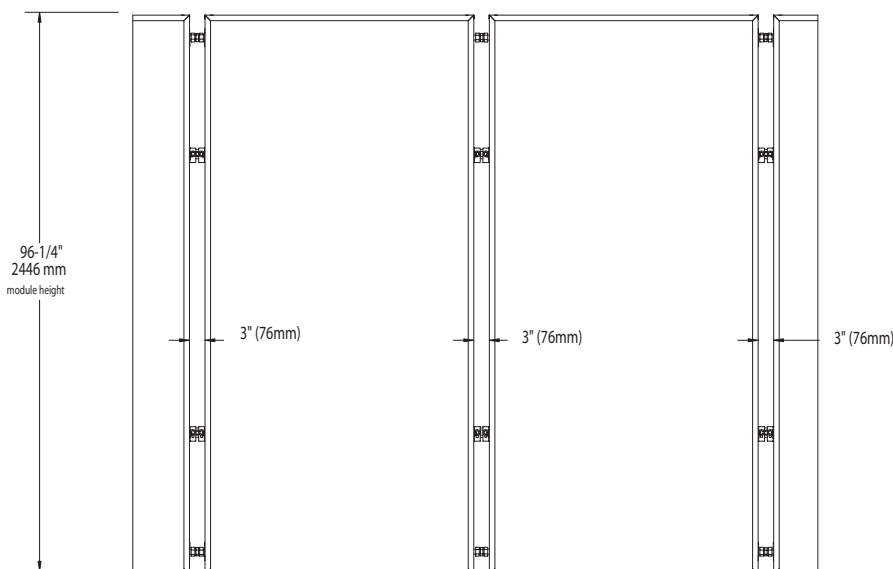
Collector Certification:
SRCC 100-2006-006A

Top View



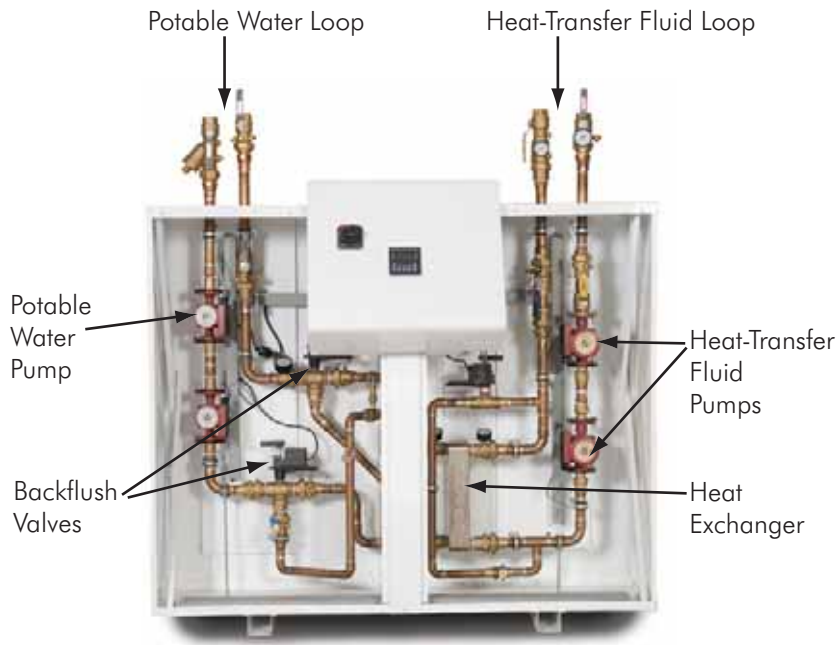
Detail View

Solar collectors are assembled in modules of up to 10 collectors across, 1 to 2 collectors high in flat-roof, sloped-roof and wall-hanging configurations. Arrays can range in size from 1 to 100 modules (1000 collectors) in food service, farm, laundry, beauty salon, motels etc. Commercial collectors should be specified for thermal applications with year round, daily or frequent load requirements.



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EnerWorks Commercial Solar Energy Unit



The compact Solar Energy Unit is preassembled and factory-tested for quick installation. The intelligent control system ensures reliable performance and extended service intervals. Quiet, reliable, multi-speed pumps and a tuneable PLC control allow customization of the Solar Energy Unit, optimizing the performance and reducing costs. The double-wall heat exchanger has visual leak detection and automatic back-flush to reduce service requirements. Daily valve exercising and a heat exchanger bypass during cold start-ups ensure trouble free operation.

Available in three sizes, the systems support 20 to 120 solar collectors (40 to 300 kW_{th}; 135,000 to 1,000,000 BTU/hr) and are compatible with EnerWorks' Micro-Flow Collectors. Options include energy metering, control for external heat exchanger operation and integration with building systems.

Number of Collectors	SEU Rating		A		B		C		Circuit Amperage	Connections	
	kW _{th}	BTU/hr	in	mm	in	mm	in	mm		Ø in	Ø mm
20	40	135,000	64.25	1632	22	559	54.66	1388	15	1-1/4	31.75
40	80	275,000									
60	100	340,000	88.5	2248	32.4	823	61.5	1562	20	2	50.8
80	160	545,000									
100	200	680,000	88.5	2248	32.4	823	61.5	1562	30	2	50.8
120	300	1,000,000									

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