

# EnerWorks Solar Energy Unit



## PRODUCT DESCRIPTION

- Solar Heat Exchange system in a compact housing
- Integrated pump, heat exchanger and controls for commercial solar arrays
- Intelligent control system for reliable performance and extended service intervals
- Pre-assembled and factory-tested for quick installation

## KEY FEATURES AND BENEFITS

- Variable multi-speed pumps minimize operating costs and allow tuning of Solar Energy Unit to site conditions
- Compatibility with EnerWorks' Micro-Flow Collectors further reduces pumping costs
- Turn-key, for hassle-free installation
- Automatic back-flush of heat exchanger reduces service requirements
- Double-wall heat exchanger with visual leak-detection
- Daily, automatic valve-exercising
- Tuneable PLC control optimizes performance
- Options include: energy metering, control for external heat exchanger operation, integration with building systems, external alarm
- Heat exchanger bypass during cold start-ups
- Reliable and quiet circulating pumps

## PRODUCT TECHNICAL SPECIFICATIONS

- Incoming power – 120/240 VAC 60 Hz, 3-wire Single-phase
- Sensor connections – 24 V DC on Class 2 circuit
- Tyfocor™ heat transfer fluid
- Installation requires pressure relief valve and expansion tanks

Number of Collectors	SEU RATING		Width		Depth		Height		Circuit Amperage A	Connections	
	kW <sub>th</sub>	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									

# EnerWorks Commercial Collector Mounting on Sloped Roofs



## PRODUCT DESCRIPTION

- Complete mounting, connection and flashing kit includes all hardware and allows EnerWorks collectors to be installed on sloped roofs
- Mounting system includes purpose-designed brackets, struts and hardware
- Connection kit consists of flexible bellows and accessories
- Sheet-metal flashing kit covers gap between collectors and collector rows and eliminates debris buildup on pitched roofs

## KEY FEATURES AND BENEFITS

### Flashing

- Attractive and low-profile – piping and mounting components concealed under flashing
- Flashing slides into slot on collector frame for quick installation and clean finish
- Flashing matches color and finish of collectors

### Brackets

- Mounting brackets attach to collectors via a single bolt
- Top brackets have lifting eyelets and “hook” tabs that make installation of collectors safe and easy

### Bellows

- Bellow connectors allow thermal expansion of collector header tubes
- Bellow connectors are stainless steel, corrosion-resistant
- Flexible connector and V-Clamps can be removed without moving adjacent collectors

## PRODUCT TECHNICAL SPECIFICATIONS

- **Mounting brackets:** hot-dip galvanized, heavy-duty 12-gauge steel
- **Strut channels:** galvanized, slotted Unistrut T3000; specialized channel nuts enable fast, safe attachment
- **Bracket to collector bolt:** 5/16–18” x 1” (7.9375–7.05 mm x 25.4 mm) zinc bright plated Grade 5 steel
- **Bellow connector:** 0.86” (22 mm) diameter 321 stainless steel, 2.25”–2.44” (57–62 mm) relaxed length, capable of 5,000 life cycles at 145 psi (10 bar) and 392°F (200°C) temperatures
- **Flashing:** Galvalume™ coated steel, mill-painted with AKZO Nobel Medium Bronze Polydure™ 1000 polyester paint, frequently used for steel roofs, siding, window cladding and other exterior applications subjected to harsh environments



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