T +972.8.998.3201 ∘ **F** +972.8.998.5034 ∘ Kibbutz Magen 8546500, Israel www.magen-ecoenergy.com

MAGEN
eco-ENERGY

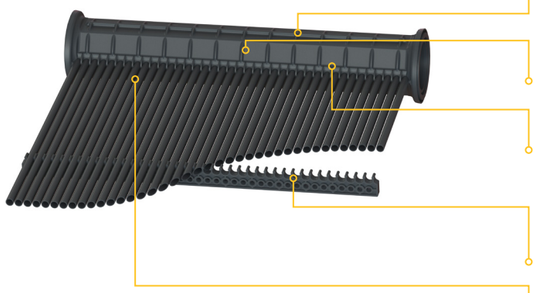
January 2018

SunValue
Capture the sun

Extend your swim season at competitive price

MAGEN
eco-ENERGY

SunValue Unique Features



Unique Hexagon shaped manifold for a flat aesthetic installation on a large range of roof types.

Reinforcement Ribs ensures the manifold header long life in varying pressures and temperatures.

One of a kind Over-Molding manufacturing method automatically injects the header directly over the panel tubes with no leaks.

Spacer Bars to prevent warping of the panel over time, as well as the abrasion of the riser tubes.

Individual Tube Design minimizes wind effects on the panel and creates extreme mechanical stability.

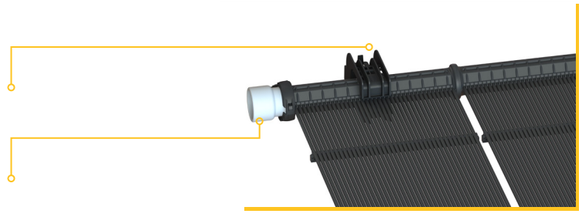
Modular Structure enables fast and firm connection between panels, creating any size absorption area over any type of roof imaginable.

Specially Formulated Polymer Material unique polymer formula stabilizes against sustained ultraviolet radiation, extreme weather and aging.

Alligator Clamp can be positioned anywhere on the panel header for direct drilling to various arrangements of roof truss structures.

Parts & Fittings All-Polymer parts, creating simple connection between panels and standard plumbing pipes.

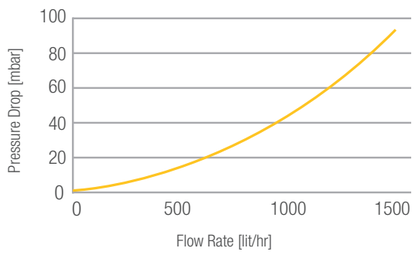
* Optional fittings to flex hose with a 2 ¼" adaptor.



Dimensions & Design Parameters

Collectors Type		*SV-50 1.2X3.65m 4'X12'*	*SV-40 1.2X3.04m 4'X10'*	*SV-30 1.2X2.43m 4'X8'*
M.E.E. Cat No.		127612	127611	127608
Length	m	3.65	3.04	2.43
Width	m	1.2	1.2	1.2
Area	m^2	4.62	3.85	2.77
Weight "Dry"	Kg	7.5	6.2	5
Volume Capacity	Lit	14.4	11.7	9
Weight "Wet"	Kg	22.3	18.9	15.6
No. of Spacers	#	12	10	7
Filled Area Weight	Kg./ m^2	5.09	5.19	5.36
Typical flow	Lit. hr	1200	900	720

Panel Pressure drop Vs. Flow Rate



$[mbar]=3E\text{-}5\ (l/h)^2 +0.0134\ (l/h) +0.2343$

Potable Water & Foodstuffs Contact Certification

Polypropylene is certified for use with potable water, as specified in the German standard DVGW-W270, and for foodstuffs contact as specified in the Swiss standard KsV-817041 and the British standard SI2000-3162.

Chemical Resistance

The Polymer, polypropylene material is highly durable against: Corrosion, Lime scale, Chlorine, Bromine, Iodine, HCL, Salts and Sea water, and other swimming pool disinfectants.

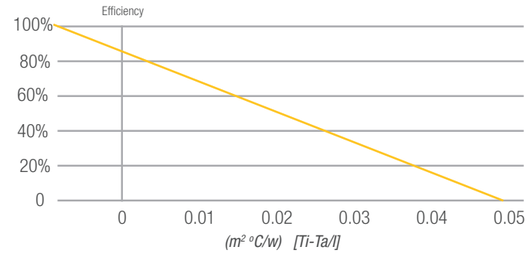
Performance Rating & Daily Energy Output

Kilowatt-hours (thermal) Per m^2 Per Day			*Thousands of Btu Per ft^2 Per Day*		
Climate Category (T_i-T_a)	High Radiation (6.3 kWh/m^2.day)	Medium Radiation (4.7 kWh/m^2.day)	Climate Category (T_i-T_a)	High Radiation (2000 Btu/ft^2.day)	Medium Radiation (1500 Btu/ft^2.day)
A (-5 °C)	6.5	5.1	A (-9 °F)	2.1	1.6
B (5 °C)	3.3	2.0	B (9 °F)	1.0	0.6
TECHNICAL INFORMATION			Tested in accordance with: ISO 9806:1994		
ISO Efficiency Equation [NOTE: Based on gross area and (P)=T_i-T_a]					
SI UNITS:	Wind speed (u) in m/s, Temperature (Ti-Ta) in °C, Radiation (G") in W/m^2 =(0.909)(1-0.0460u)-(11.9716+14.2950u)(P/G")				
IP UNITS:	Wind speed (u) in mph, Temperature (Ti-Ta) in °F, Radiation (G") in Btu/hr-ft^2 =(0.909)(1-0.0206u)-(2.1084+1.1254u)(P/G")				

Mechanical Stability

Maximum Recommended Operating Pressure	bar	4
	psi	60
Burst Pressure	bar	6
	psi	88

SunValue Efficiency Graph



How Does the Solar System Work?

1. The existing pool pump directs pool water via a controlled motorized valve to the solar collector.
2. Pool water enters the solar collector at the bottom and rises to the top through the individual tubes of the collector.
3. Solar energy heats the water as it flows through the collector.
4. The Vaccum/air valve evacuation protects the system from freezing.
5. The heated water then returns to the pool, and the cycle is repeated until the pool has been sufficiently warmed by the sun.
6. The solar heating process is fully automatic, using temperature sensors and a differential controller.