

Heliocol - solar pool heating

Datasheet

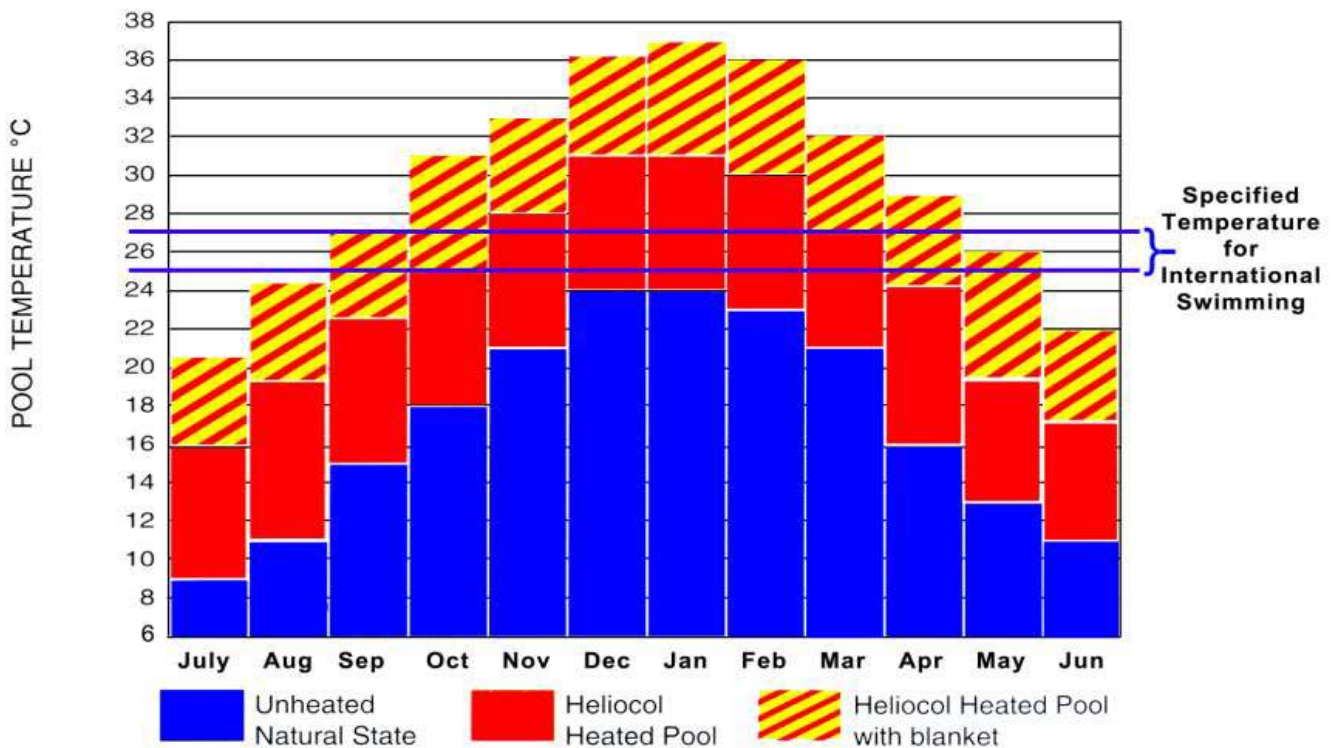
Features

- 10 Year warranty on panels.
- 20 Year proven life expectancy.
- In continuous manufacture since 1977.
- ISO 9002 certified factory.
- Header and riser of identical material overmoulded as one unit - no welds or joints.
- Open riser design eliminates moisture build-up under the collector preventing roof deterioration.
- High wind load capabilities.
- Freeze resistant.
- Corrosion proof.



POOL TEMPERATURE / USAGE CHART

70 % System - Johannesburg



Heliocol Unique Features

OVERMOULDING TECHNOLOGY

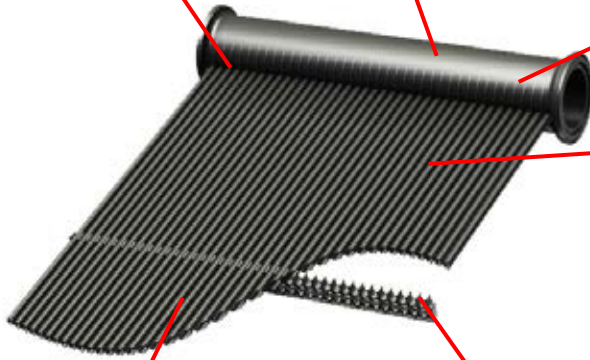
A unique injection process that connects the riser tubes to the manifold header to create a panel which is literally a one plastic unit.

CYLINDRICAL SHAPE

All parts are rounded, with no sharp angles, so as to avoid stress concentration or the risk of busting at high pressure.

FINS

Provides added strength to the unit while preventing differential thermal expansion and distortion of the system.



SPECIAL FORMULATED MATERIAL

Tested in authorized labs, and proved as stabilized against the effects of sustained UV radiation, extreme weather conditions and aging.

INDIVIDUAL TUBE DESIGN

Minimizes wind effects on the panel and creates an extreme mechanical stability.

SPACER BARS

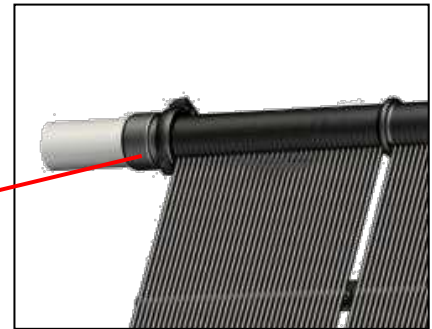
Prevents distortion of the panel over time, due to and the abrasion of the riser tubes the thermal expansion of the panel.

MODULAR STRUCTURE

Enables fast & firm connection between panels, to create any desired absorption area for any roof type.

PARTS & FITTINGS

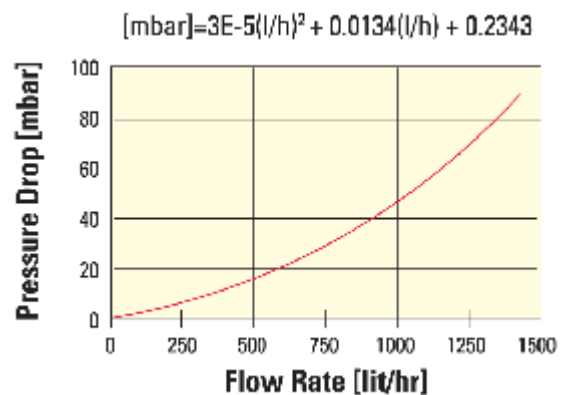
All plastic, for simple connection between panels and standard plumbing pipes.



DIMENSIONS & DESIGN PARAMETERS

COLLECTOR TYPE		HC-50 4'X12.5'	HC-40 4'X10.5'	HC-38 4'X9.5'	HC-30 4'X8'
P.M Cat No.		127112	127111	127110	127108
LENGTH	m	3.85	3.23	2.92	2.31
WIDTH	m	1.2	1.2	1.2	1.2
AREA	m ²	4.62	3.85	3.52	2.77
WEIGHT "DRY"	kg.	10	8.5	8.2	8.2
VOLUME CAPACITY	lit.	14.4	11.7	11.4	9
WEIGHT "WET"	kg.	24.4	20.2	19.6	15.8
NO. OF SPACERS	#	12	10	9	7
FILLED AREA WEIGHT	kg/m ²	5.16	5.3	5.3	5.7
REC. FLOW RATE	lit/hr	1200	900	900	720

PANEL PRESSURE DROP Vs. FLOW RATE



CHEMICAL RESISTANCE

The polymer is highly durable against:

- Corrosion & Scaling
- Chlorine, Bromine, Iodine, HCL and other swimming pool chemicals
- Salts & sea water

FOODSTUFFS CONTACT CERTIFICATION

The Compound polypropylene is certified for use as a plastic for foodstuffs contact applications, as specifies in the Swiss standard KsV-817041 and the British standard S.I 2000 no. 3162.

F.S.E.C PERFORMANCE RATING & DAILY ENERGY OUTPUT

Water Temp.	Model / Units	HC-50 4'X12.5'	HC-40 4'X10.5'	HC-38 4'X9.5'	HC-30 4'X8'
Cool 35°C (95°F)	kWh/day	13.51	10.72	10.29	8.18
	Btu/day	46,100	36,600	35,100	27,900
Medium 50°C (122°F)	kWh/day	4.84	3.25	3.09	2.93
	Btu/day	16,500	11,100	12,600	10,000

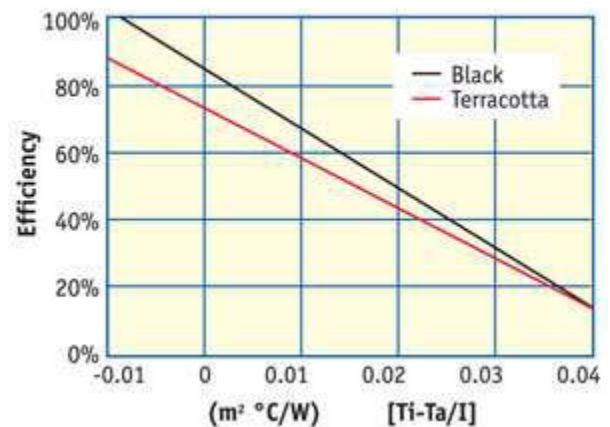


COLLECTOR EFFICIENCY GRAPH & EQUATIONS

(Tested by F.S.E.C according to ASHRAE standard 96-1989)

Black	Terracotta
$\eta = 0.828 - 18.52(T_i - T_a)/I$	$\eta = 0.727 - 15.59(T_i - T_a)/I$
Units of $(T_i - T_a)/I$ are $[m^2 \text{ } ^\circ\text{C} / \text{Watt}]$	
$\eta = 0.828 - 3.26 (T_i - T_a)$	$\eta = 0.828 - 3.26 (T_i - T_a)$
Units of $(T_i - T_a)/I$ are $[\text{hr-ft}^2 \text{ } ^\circ\text{F} / \text{BTU}]$	





HELIOCOL EFFICIENCY GRAPH



MECHANICAL STABILITY

Water temperature	°C	20	40	60
	°F		68	104
Maximum Recommended Operating pressure	bar	8	6	4
	psi	120	90	60
Burst Pressure	bar	25	18	14
	psi	360	260	200

“Standards & Certification”

ISO 9001-2008	International	
ISO 14001:2004	International	
Solar Keymark Certification – EN12975	Europe	
Solar Rating and Certification Corporation (S.R.C.C) – OG100	U.S.A	
NSF 61	U.S.A	
AS/NZS 2712:2007	Australia / New-Zealand	
NMX-ES-001-NORMEX-2005	Mexico	

HELIOCOL was Tested in:

SPF – Institut für Solartechnik	Europe	
NCSR Demokritos	Europe	
Florida Solar Energy Center (F.S.E.C), Florida	U.S.A	
Ortech, Ontario	Canada	
Instituto Nacional de Técnica Aeroespacial (I.N.T.A)	Spain	
INMETRO, Laboratories, Minas Gerais	Brazil	
Bodycote Materials testing Canada inc.	U.S.A	

Membership:

SEIA – Solar Energies Industries Association	U.S.A	
FlaSEIA – Florida Solar Energies Industries Association	U.S.A	
CalSEIA – California Solar Energies Industries Association	U.S.A	
APSP – Association of Pool and Spa Professionals	U.S.A	