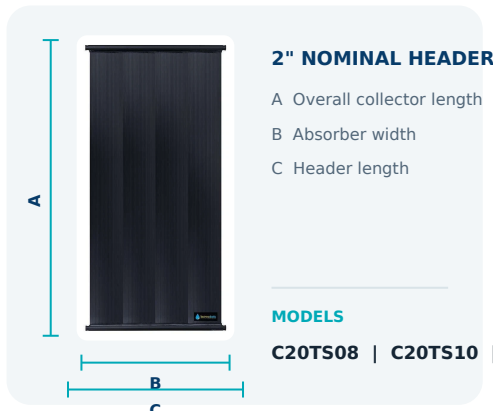


COMMERCIAL-GRADE CONSTRUCTION



Manufactured in Florida, USA, Techno-Solis collectors are commercial-grade, unglazed polymer panels. Current manufacturer literature describes the panels as 35% thicker than competing panels for increased durability and service life. The header and absorber are made from virgin black polypropylene/polyethylene co-polymer containing a proprietary ultraviolet stabilizer, using an in-house continuous extrusion and vacuum-forming process.

The fully wetted absorber is formed from four longitudinally heat-sealed extrusions containing 104 interconnected elliptical channels. The absorber is welded to the header and reinforced with a 1/8-inch bead at the junction. Independent laboratory testing was terminated at 1,000 psi without rupture. A subaqueous diffuser manifold provides one opening per channel to improve flow distribution and turbulence. Panels connect with EPDM expansion couplings and stainless-steel gear clamps. Roof or rack attachment uses 5/8-inch polypropylene strap and stainless-steel hardware.

1,006

BTU/FT²/DAY - FSEC

62.9%

EFFICIENCY VS. 1,600 BTU/FT²

170

MPH RATED WIND LOAD

104

ELLIPTICAL FLOW CHANNELS

DIMENSIONS

DIMENSION	4 × 8	4 × 10	4 × 12
Model / part number	C20TS08	C20TS10	C20TS12
Nominal size (ft / m)	4 × 8 ft / 1.22 × 2.44 m	4 × 10 ft / 1.22 × 3.05 m	4 × 12 ft / 1.22 × 3.66 m
Collector length "A" (in / cm)	96.00 in / 243.8 cm	120.37 in / 305.7 cm	144.12 in / 366.1 cm
Absorber width "B" (in / cm)	47.50 in / 120.7 cm	47.50 in / 120.7 cm	47.50 in / 120.7 cm
Header length "C" (in / cm)	50.75 in / 128.9 cm	50.75 in / 128.9 cm	50.75 in / 128.9 cm
Header O.D. (in / cm)	2.31 in / 5.87 cm	2.31 in / 5.87 cm	2.31 in / 5.87 cm
Header I.D. (in / cm)	1.89 in / 4.80 cm	1.89 in / 4.80 cm	1.89 in / 4.80 cm
Gross collector area (ft ² / m ²)	31.65 ft ² / 2.94 m ²	39.79 ft ² / 3.70 m ²	47.62 ft ² / 4.42 m ²

THERMAL PERFORMANCE RATING

THERMAL PERFORMANCE	4 × 8	4 × 10	4 × 12
Panel output* (Btu/day / kJ/day)	31,840 / 33,593	40,029 / 42,233	47,906 / 50,544
Square-foot output* (Btu/ft ² /day / kJ/m ² /day)	1,006 / 11,425	1,006 / 11,425	1,006 / 11,425
Efficiency (output ÷ 1,600 Btu/ft ² avg.)	62.9%	62.9%	62.9%

*Derived from the current Techno-Solis published Florida Solar Energy Center (FSEC) rating of 1,006 Btu/ft²/day. Panel output is calculated using the published gross collector area; metric values are unit conversions.

WEIGHT AND FLUID CAPACITY

WEIGHT / CAPACITY	4 × 8	4 × 10	4 × 12
Dry weight (lb / kg)	20 lb / 9.07 kg	25 lb / 11.34 kg	30 lb / 13.61 kg
Wet weight (lb / kg)	44.7 lb / 20.28 kg	53.6 lb / 24.31 kg	62.5 lb / 28.35 kg
Wet loading (lb/ft² / kg/m²)	1.41 lb/ft² / 6.90 kg/m²	1.35 lb/ft² / 6.57 kg/m²	1.31 lb/ft² / 6.41 kg/m²
Fluid capacity (gal / L)	4.14 gal / 15.67 L*	4.60 gal / 17.50 L	5.08 gal / 19.23 L*

FLOW - PARALLEL FORCED CIRCULATION

FLOW RATE	4 × 8	4 × 10	4 × 12
Maximum (gpm / L/min)	10 / 37.86	10 / 37.86	10 / 37.86
Minimum (gpm / L/min)	2.5 / 9.47	2.5 / 9.47	3.0 / 11.36
Recommended (gpm / L/min)	5.0 / 18.93	5.0 / 18.93	5.0 / 18.93

PRESSURE

MAXIMUM PRESSURE RATING - ALL MODELS

35 psi / 241 kPa

OPTICAL PERFORMANCE - ALL MODELS

SOLAR RADIATION ABSORPTIVITY	95%
INFRARED RADIATION EMISSIVITY	92%
COLLECTOR TYPE	Unglazed polymer
TEST FLUID	Water

CONSTRUCTION AND CONNECTION DETAILS

• ABSORBER

Four heat-sealed extrusions form a fully wetted surface with 104 interconnected elliptical channels.

• DIFFUSER MANIFOLD

One opening per channel promotes balanced distribution and turbulence.

• ROOF / RACK ATTACHMENT

5/8-inch polypropylene strap with stainless-steel mounting hardware.

• REINFORCED WELD

A 1/8-inch bead reinforces the absorber-to-header junction.

• PANEL CONNECTIONS

EPDM expansion couplings secured with stainless-steel gear clamps.

• MATERIAL

Virgin black polypropylene/polyethylene co-polymer with proprietary UV stabilization.

*The 2-inch 4×8 and 4×12 fluid capacities are calculated estimates. They use the certified C20TS10 capacity of 4.60 gal as the reference and apply the measured capacity change between the 1.5-inch 4×8, 4×10 and 4×12 collectors. The 5.0 gpm recommended flow and 35 psi maximum pressure rating are documented for all listed 1.5-inch and 2-inch models in ICC-ES PMG Listing PMG-1217 (effective November 1, 2013). That historical listing required periodic re-examination and is cited only as technical support, not as evidence of current active certification. Current dimensions, flow, FSEC performance, wind rating and weights follow the Techno-Solis online specifications. The online U.S. and metric weight entries contain internal inconsistencies; displayed metric values are mathematically converted from the stated U.S. weights.