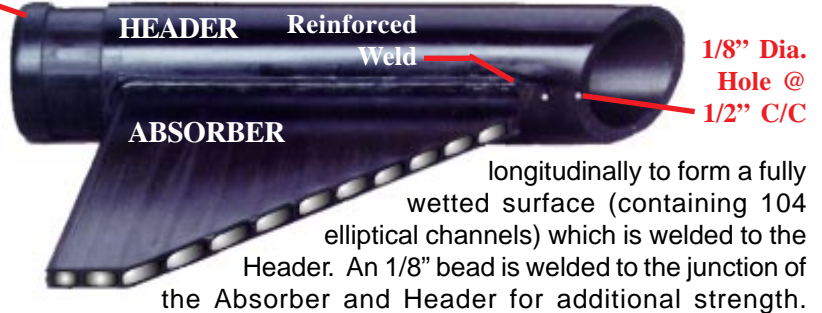
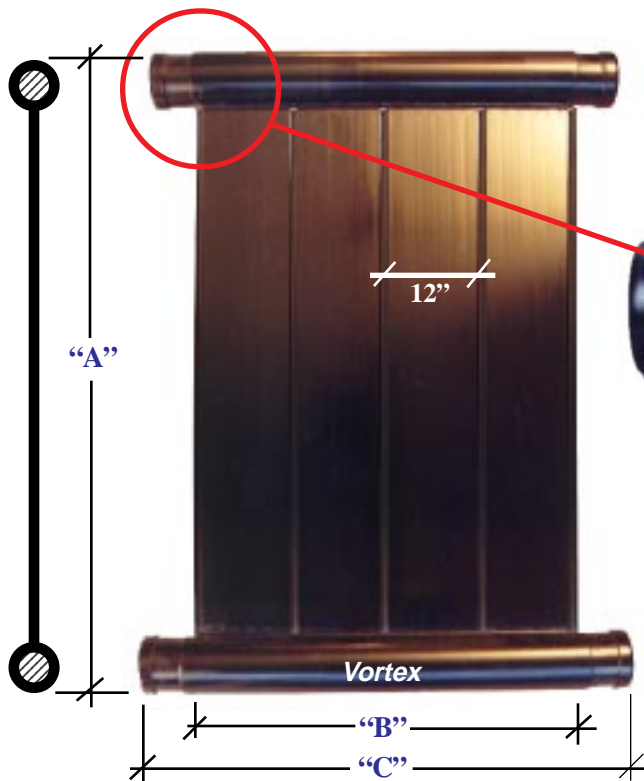


## General Description

**Vortex** is made in Florida, USA. It is a Commercial Grade panel with 25% more material content than the industry standard, resulting in increased durability and longevity. The Header and Absorber are made from Co-polymer (polypropylene and polyethylene) virgin black plastic containing a proprietary ultraviolet (UV) stabilizer with an "In-House" continuous extrusion process using vacuum forming. The Absorber is comprised of four extruded strips heat sealed



Independent laboratory testing terminated at 1000 psi with no rupture. The Header incorporates a "Subaqueous Diffuser Manifold" with one hole per channel for improved flow distribution and turbulence. The panels are connected via EPDM (ethylene-propylene-diene-monomer) Expansion Hoses with Stainless Steel gear clamps. Attachment to the roof/structure is with polypropylene 5/8" strap and all Stainless Steel hardware.

## Technical Data

### THERMAL PERFORMANCE RATING\*

	U.S.	/	Metric	U.S.	/	Metric	U.S.	/	Metric
MODEL NO.	VT48	/	VT48	VT40	/	VT40	VT32	/	VT32
PANEL OUTPUT* (Btu/day / Kj/day)	45,600	/	48,100	38,100	/	40,181	30,400	/	32,060
SQ. FT. OUTPUT* (Btu/ft <sup>2</sup> / Kj/m <sup>2</sup> )	958	/	10,858	958	/	10,858	958	/	10,858
EFFICIENCY (Btu/ft <sup>2</sup> /(1600 Btu/ft <sup>2</sup> Avg))			60%			60%			60%

### DIMENSIONS

NOMINAL SIZE (ft / m)			4x12 / 1.22x3.66	4x10 / 1.22x3.05	4x8 /
1.22x2.44					
COLLECTOR LENGTH (in / cm)	"A"	144 / 365.8	120.25 / 305.4	95.575 / 242.8	
ABSORBER WIDTH (in / cm)	"B"	47.50 / 120.7	47.50 / 120.7	47.50 / 120.7	
HEADER LENGTH (in / cm)	"C"	50.75 / 128.9	50.75 / 128.9	50.75 / 128.9	
HEADER O.D. (in / cm)		1.90 / 4.83	1.90 / 4.83	1.90 / 4.83	
HEADER I.D. (in / cm)		1.48 / 3.76	1.48 / 3.76	1.48 / 3.76	
GROSS COLLECTOR AREA (ft <sup>2</sup> / m <sup>2</sup> )		47.64 / 4.43	39.79 / 3.62	31.65 / 2.88	

### WEIGHT

DRY (lbs / kg)	30 / 13.6	25 / 11.3	20 / 9.1
WET (lbs / kg)	64.3 / 29.1	55.4 / 25.1	45.4 / 20.6
WET (lbs/ft <sup>2</sup> / kgs/m <sup>2</sup> )	1.35 / 6.74	1.39 / 6.95	1.46 / 7.18
FLUID CAPACITY (gal / l)	4.12 / 15.57	3.64 / 13.76	3.18 / 12.02

### FLOW - Parallel Forced Circulation

MAX. (gpm / mlps)	10 / 633	10 / 633	10 / 633
MIN. (gpm / mlps)	3.0 / 190	2.5 / 158	2.5 / 158
RECOMMENDED (gpm / mlps)	4-5 / 253-316	4-5 / 253-316	4-5 / 253-316

### PRESSURE (All Models)

PRESSURE DROP (psi / kPa)	0.15 / 1.03
MAX. FLUID PRESSURE (psi / kPa)	90 / 620
MAX. OPERATING at 140°F (psi / kPa)	35 / 241

### OPTICAL PERFORMANCE (All Models)

SOLAR RADIATION ABSORPTIVITY	95%
INFRARED RADIATION EMISSIVITY	92%

\*Devired from the Florida Solar Energy Center (FSEC)