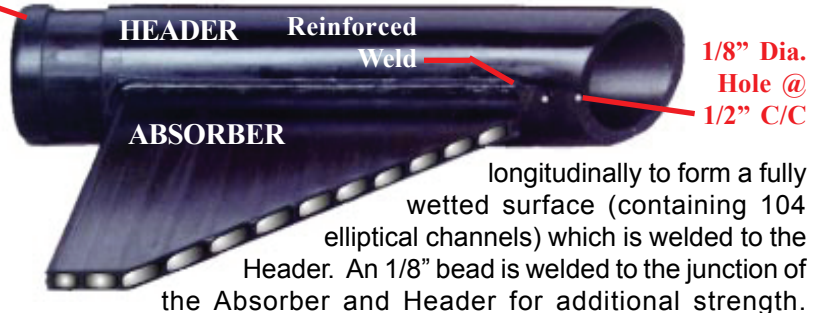
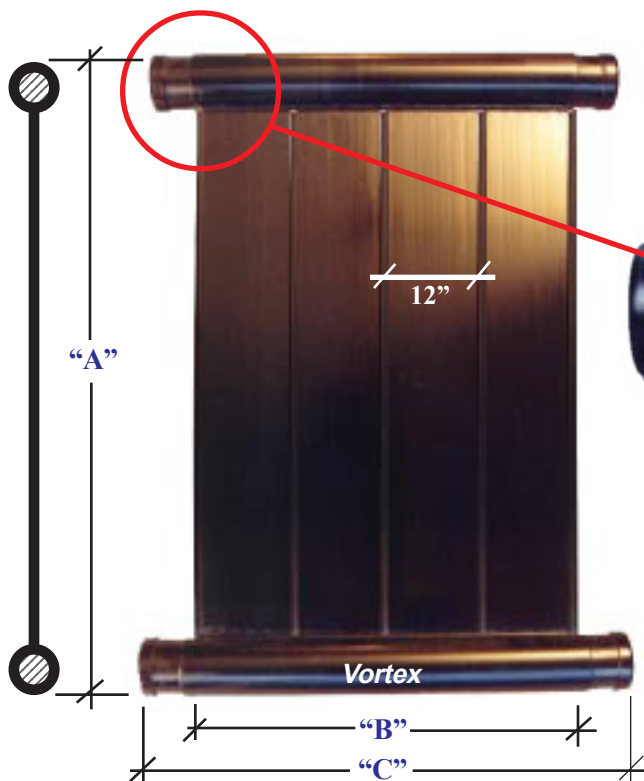


## General Description

**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



longitudinally to form a fully wetted surface (containing 104 elliptical channels) which is welded to the Header. An 1/8" bead is welded to the junction of the Absorber and Header for additional strength. 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

		U.S.	/	Metric	U.S.	/	Metric	U.S.	/	Metric
NOMINAL SIZE (ft / m)		4x12	/	1.22x3.66	4x10	/	1.22x3.05	4x8	/	
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

	U.S.	/	Metric	U.S.	/	Metric	U.S.	/	Metric
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

	U.S.	/	Metric	U.S.	/	Metric	U.S.	/	Metric
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)

	U.S.	/	Metric
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%

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