

VORTEX™



enjoy the feel... of a solar heated pool or spa.

Vortex is committed to providing the very highest quality, most durable pool heaters in the solar industry, and we back it up with the best customer warranty offered today.

VORTEX panels are designed to meet heavy-duty commercial grade specifications, and are covered by a TEN YEAR Full-Replacement warranty which includes freeze protection!

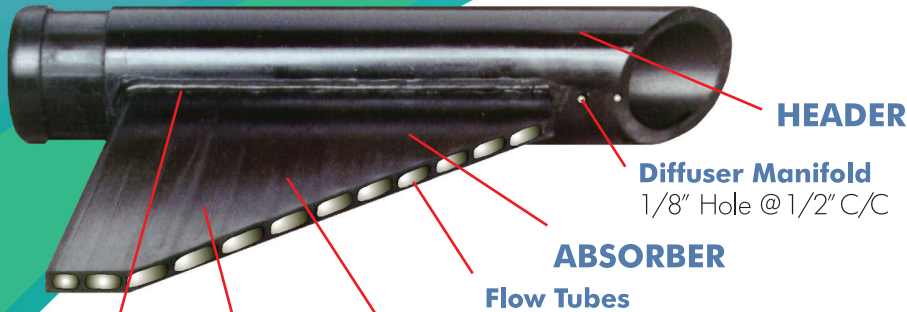
VORTEX™ QUALITY SOLAR POOL HEATERS

800 333 9276

VORTEX™

COMMERCIAL GRADE SOLAR PANELS

CROSS-SECTION



HEADER

Diffuser Manifold
1/8" Hole @ 1/2" C/C

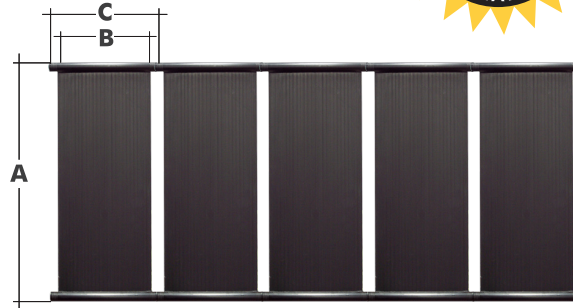
ABSORBER

Flow Tubes

Carbon Black additives
absorb solar energy

UV Inhibitors
prevent deterioration

Reinforced welds
1/8" heavy-duty bead



Flow rate/pressure and construction characteristics:

VORTEX panels are designed to combine high flow rates with low system pressure. This allows for a maximum transfer of heat while reducing strain on the pool pump.

- **Superior Quality** - Vortex panels are 30% heavier than the industry average.
- **Best Warranty** - Solar Direct replaces all defective panels and will make no attempt at repair for a full 10 years.
- **Unique Design** - The inside tubes are shaped uniquely which helps avoid freezing & increases water flow.
- **Complete Kits** - Vortex Kits are the most complete kits in the industry - no other parts needed for installation.
- **Connection Method** - Connection between headers or manifolds is a unique patented process proven to be more effective than other methods.
- **Installation Method** - Vortex panels are not glued & they can be removed if need be. Glued panels may rip the roof off if removed.
- **Technical Support** - Person to person assistance by phone.
- **Made in the USA**

MODEL	VT48	VT40	VT32
	US Metric	US Metric	US Metric
THERMAL PERFORMANCE*			
Panel Output* Btu/day Kj/day	45,600 48,100	38,100 40,181	30,400 32,060
Sq Ft Output* Btu/ft	958 10,858	958 10,858	958 10,858
Efficiency Btu/ft ² /(1600 Btu/ft ² ^{AVG})	60%	60%	60%
DIMENSIONS ~WEIGHT ~FLOW/Parallel forced circulation			
Nominal Size ft m	4x12 1.22x3.66	4x10 1.22x3.05	4x8 1.22x2.44
A Collector Length in cm	143.3 364	119.55 303.7	95.18 241.8
B Absorber Width in cm	47.63 121	47.63 121	47.63 121
C Header Width in cm	50.75 128.9	50.75 128.9	50.75 128.9
Header OD in cm	1.90 4.83	1.90 4.83	1.90 4.83
Header ID in cm	1.48 3.76	1.48 3.76	1.48 3.76
Gross Collector Area ft ² m ²	47.31 4.395	39.46 3.666	31.40 2.917
Dry Weight lbs kg	29 13.15	24 10.89	19 8.62
Wet Weight lbs kg	62.5 28.35	53.6 24.31	44.7 20.28
Fluid Capacity gal l	4.12 15.57	3.64 13.76	3.18 12.02
Max Flow gpm l/min	10 37.86	10 37.86	10 37.86
Min Flow gpm l/min	3.0 11.36	2.5 9.47	2.5 9.47
Recommended gpm l/min	4.9 18.55	4.9 18.55	4.9 18.55
Pressure: Drop 0.15psi 1.03kPa Max 90psi 620kPa Operating @140°F 35psi 241kPa			
Optical Radiation Performance: Solar Absorptivity 95% Infrared Emissivity 92%			
¹ See Warranty for complete details.			
[*] Test results from Florida Solar Energy Center (FSEC)			