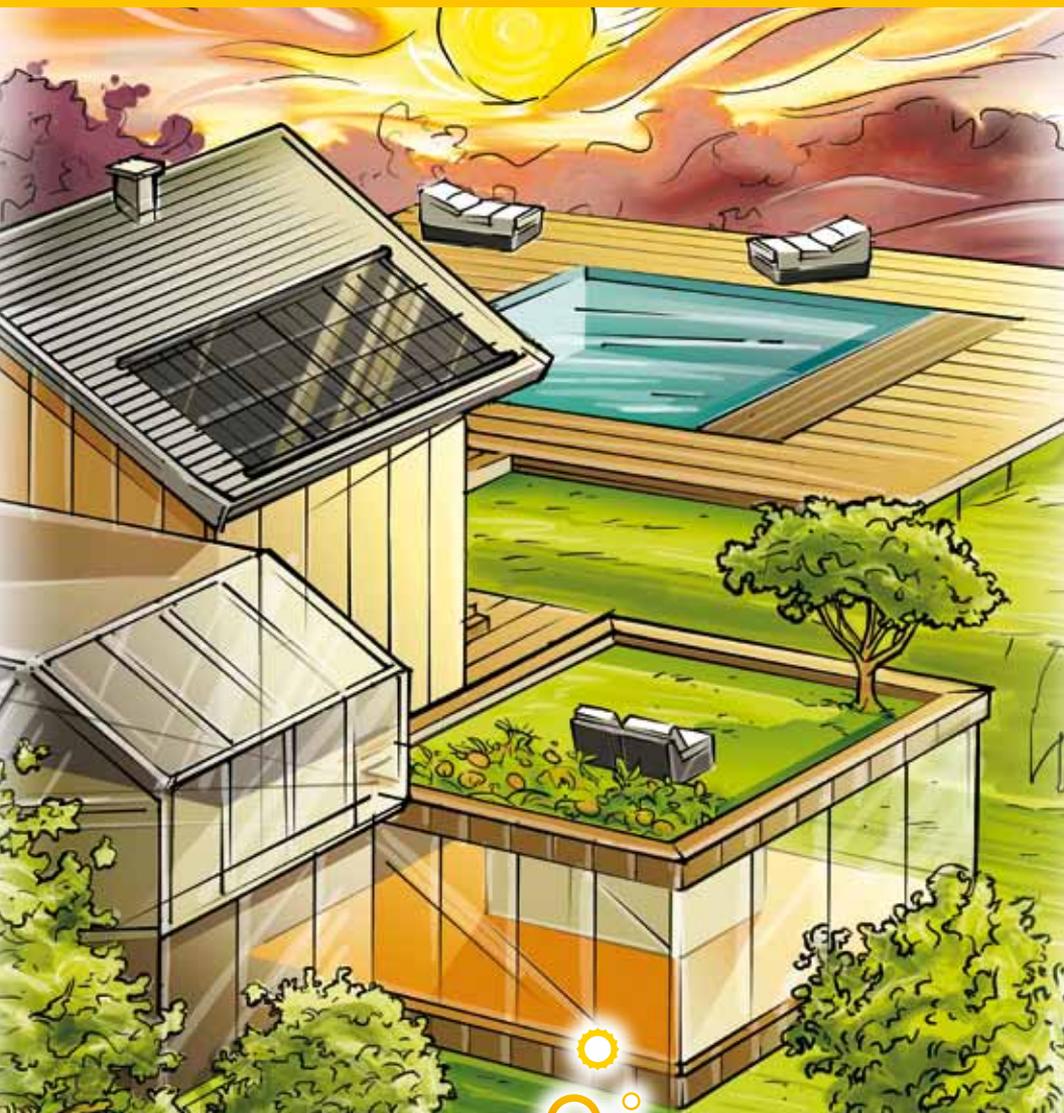


**A PRACTICAL BUYING GUIDE FOR  
TECHNOSOLIS SOLAR POOL HEATING SYSTEM**



**TechnoSolis**

**THIS SUMMER IMMERSE YOURSELF IN  
COMFORT AND PEACE OF MIND**

# Basic principles and advantages of the TechnoSolis Solar Pool Heating System



## HOW DOES IT WORK?

Black polymer plastic panels capture the energy from the sun. Using the pump from the filtration system, water is circulated through the solar panels where it is heated and then returned to the pool. The system is designed to work with the existing pump, which does not need to be situated near the solar panels.

A valve, either manual or automatic, controls the flow of water into the solar panels. The automatic option responds to changing temperature conditions and adjusts accordingly to provide optimal comfort at all times.

The surface area of the solar panels should be at least half the surface area of the pool, in order to function properly. Such a system can raise the temperature of the water 3 to 4°C (6 to 10°F).

As with any heated pool, the use of a pool cover is always recommended – a measure which maintains heat, thereby extending the swimming season.

## A WIN-WIN SITUATION !

**Free heat:** Unlike gas and electricity, which must be paid for year after year, **Solar Energy** is free...for life!

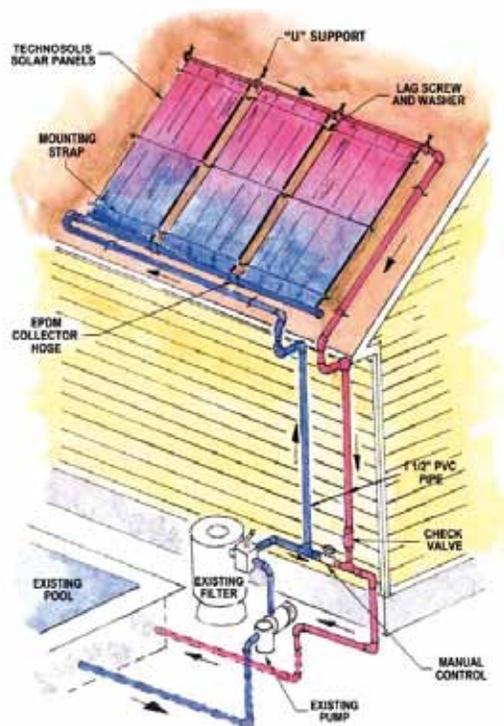
**A five month summer:** With the combined use of the TechnoSolis Solar Pool Heating System and the pool cover, the swimming season is extended at both ends. Why not take advantage – it's free!

**Comfort and peace of mind:** Enjoy warmer water all the time. No more worrying whether it's worth turning on the conventional heater – even for a short evening dip!

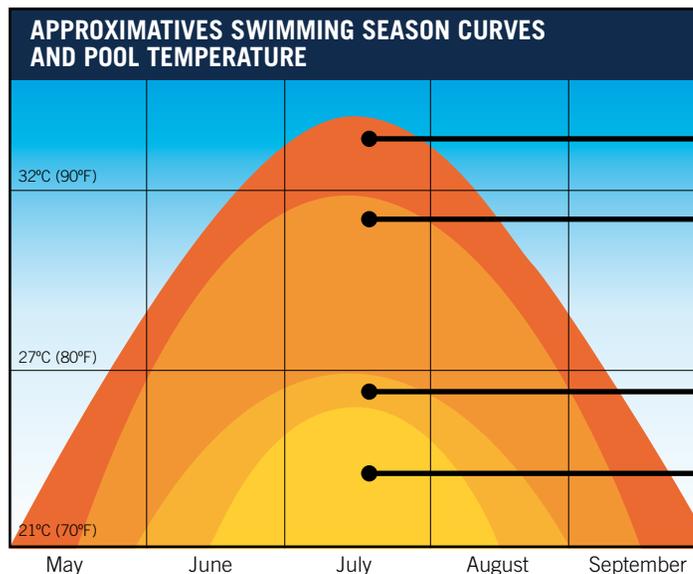
**Durable hardware:** TechnoSolis solar panels are guaranteed for 10 years, and can have a lifetime of over 20 years. They outlast, by far, the other conventional systems such as the heat pump, natural gas, and propane.

**Minimal maintenance:** Unlike conventional systems, that require yearly servicing by a technician, the TechnoSolis Solar Pool Heating System does not require any maintenance.

**The ecological choice:** No greenhouse gas emissions, no toxic by-products, no noise – **Solar energy** is clean and quiet.



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IT'S SO SIMPLE!



MAXIMISE THE EFFICIENCY OF YOUR TECHNOSOLIS POOL HEATING SYSTEM

Choosing the system that meets the needs.

Steps to follow:

1. Find the dimensions of the pool.
2. Identify the areas of the roof that receive the most sun, or any other structures that could accommodate the TechnoSolis solar panels.
3. Find the orientation of the roof where the panels will be installed.
4. Calculate by using the table below, the number of panels required.
5. Ensure that the roof surface chosen is large enough to accommodate the panels, the supply and return pipes and their fittings.

POOL		QUANTITY OF PANELS REQUIRED DEPENDING ON THE ROOF ORIENTATION (4' X 10' PANELS)		
DIMENSIONS (ft.)	AREA (sq. ft.)	SOUTH 50%	WEST 75%	EAST 80%
<b>ROUND POOLS</b>				
18	254	3	4	5
21	346	4	5	6
24	452	6	8	9
27	572	7	11	12
<b>OVAL, RECTANGULAR OR IRREGULAR-SHAPED POOLS</b>				
12 X 24	288	4	5	6
14 X 28	392	5	7	8
15 X 30	450	6	8	9
16 X 32	512	6	10	11
18 X 36	648	8	12	13
20 X 40	800	10	15	16

These figures apply to southern Canada (for northern area, add 2 to 3 panels).

Other factors may affect the number of panels needed: e.g. a pool in a shaded or windy location, the use of the pool cover, etc...

Optimize the roof area with different sizes of TechnoSolis panels: e.g. 4' x 5', 4' x 6', 4' x 7', 4' x 8', 4' x 9', 4' x 12', etc...

An informed handyman can install a TechnoSolis Solar Pool Heating System.

Pool cover

Over 50% of the heat lost from a pool is due to water evaporation at the surface.

This is why it is important to use a pool cover, which will provide hours of additional swimming, and extend the summer as well.

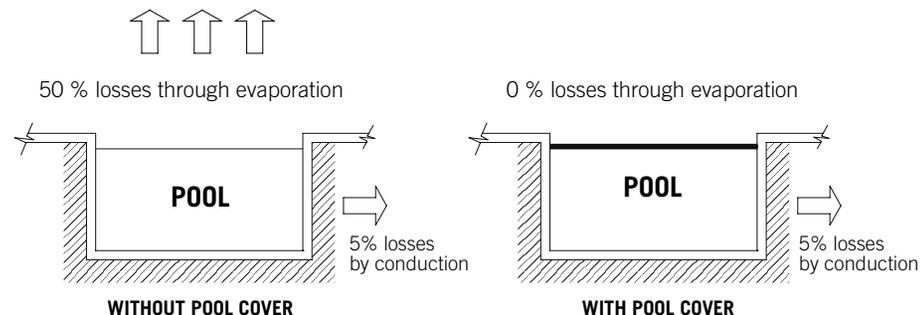
Solar control

The automatic valve function will maximize the benefits of the TechnoSolis Solar Pool Heating System. With the manual valve option, it is recommended to install a "day/night" timer switch on the pump, to avoid overcooling the pool at night, or missing all the energy of a sunny day just because the homeowner forgot to open the solar system.

The automatic control can start the system even on a seemingly cloudy day, as there is still energy that can be captured from the diffused rays. Even at night it may turn on, if the ambient air temperature is higher than the water in your pool.

Maintaining the system

With a TechnoSolis Solar Pool Heating System, there is no maintenance required. A properly installed solar pool heater on a sloped roof will drain itself when the time comes to empty the filter at the end of the season. It can then withstand harsh winter conditions without any problem.



RELAX AND LET TECHNOSOLIS AND THE SUN WORK FOR YOUR COMFORT

## Useful information when selecting and buying a pool heating system

### A COMPARISON OF VARIOUS ENERGY SOURCES



# Since 1976

### WHY TECHNOSOLIS?

By refusing to use non-renewable and polluting energy sources, homeowners are also making a wise financial decision. Thanks to the energy of the sun – simple, reliable, and free – the investment will pay for itself in less than 2 years.

Each of the technologies available has its own particular characteristics. Here are some key points to consider when making your choice.

Propane and natural gas pool heaters cost less to buy, and they are powerful heating systems. Propane is, however, the most expensive system to run, costing \$1000 or

more per season to maintain a steady water temperature, making it therefore advisable to plan on less frequent usage. Natural gas is only possible if the house is connected to an existing natural gas network.

The heat pump, designed to maintain a constant water temperature throughout the summer, costs \$400 or more each year to run. It can be noisy and the apparatus will need to be replaced or reconditioned after 5 or 6 years.

The following table compares the various costs of the different heating systems for the two most popular pool models.

**ESTIMATED COSTS OF EQUIPMENT, INSTALLATION AND ENERGY SUPPLY FOR AN ABOVE-GROUND 24FT. (7.5M) DIAMETER POOL OR AN IN-GROUND POOL 15 X 30 FT (4.6 X 9.2M)**

	SOLAR (1)	PROPANE (2)	NATURAL (3)	HEAT PUMP (4)
<b>EQUIPMENT</b>	<b>\$ 2 240</b>	<b>\$ 1 600</b>	<b>\$ 1 500</b>	<b>\$ 2 800</b>
<b>INSTALLATION</b>	<b>\$ 600</b>	<b>\$ 500</b>	<b>\$ 500</b>	<b>\$ 325</b>
<b>ENERGY PER YEAR</b>	<b>\$ -</b>	<b>\$ 850</b>	<b>\$ 425</b>	<b>\$ 400</b>
<b>1<sup>ST</sup> YEAR TOTAL</b>	<b>\$ 2 840</b>	<b>\$ 2 950</b>	<b>\$ 2 425</b>	<b>\$ 3 525</b>
<b>TOTAL 10 YEARS*</b>	<b>\$ 2 840</b>	<b>\$ 10 600</b>	<b>\$ 6 250</b>	<b>\$ 7 125</b>

\*Warranty period of the TechnoSolis solar panels.

- 6 panels (4' x 10') facing due south, using manual valve control. For an automatic control, add approximately \$500.
- 205 000 BTU/hr system – occasional use, with two refills of a 370L propane tank at \$0.70 /L. Tank rental \$85 per year.
- 205 000 BTU/hr system at 80% efficiency – pool maintained at 27°C (80°F) from mid June to mid September, at \$0,60/m3.
- 100 000 BTU/hr system – pool maintained at 27°C (80°F) from mid June to mid September, at 5.9 /kWh. Does not include cost of reconditioning the heat pump after 5 or 6 years. If the house main electrical panel is not strong enough add a \$600 more.

6

Thirty-five years ago, TechnoSolis revolutionized the solar pool heating industry with a solar panel that could not only match all others in heating performance, but could also last several years longer. Due to the quality and performance of our products, as well as our customer service, our company has experienced extraordinary growth since then. We now have offices in Canada and the United States, as well as distributors throughout the world.

#### DESIGN AND CONSTRUCTION

TechnoSolis solar panels are visibly thicker and more robust than any other solar pool panels. This is because we use up to 35% more raw materials in our panels, which means that they:

- Last several years longer
- Attract more heat
- Reduce heat loss

As well, TechnoSolis uses the same high quality polypropylene throughout the entire panel, which eliminates weak spots caused by expansion and contraction during temperature changes – an important feature, particularly in North America.

#### PERFORMANCE

TechnoSolis solar panels have easily surpassed all quality and performance standards set by the various solar testing agencies, such as the Canadian Solar Association (CSA), the Florida Solar Energy Center (FSEC), and the Solar Rating and Certification Corporation (SRCC). TechnoSolis is also a member of the Canadian Solar Industries Association (CanSIA), and is recommended by CAA–Habitation.

#### PEACE OF MIND

TechnoSolis tests every single solar panel before it leaves the factory, thereby ensuring a Solar Pool Heating System in perfect working order. In addition, we offer a 10-year warranty, as well as a limited lifetime warranty. Homeowners can therefore rest assured that the pool will be heated **for free** by the sun, without headaches or hassles, for many years to come.

#### CERTIFICATIONS



**GUARANTEED SAVINGS THANKS TO  
TECHNOSOLIS AND THE SUN**

7

## Buyer's checklist

### QUESTIONS TO KEEP IN MIND...



#### REGARDING THE POOL AND ROOF

What are the dimensions of the pool?

What is the orientation of the roof where the solar panels will be installed?

What are the dimensions of that roof?

Are there any obstructions on that roof?

Are there any large trees making shade on the pool or roof?

What is the HP of the pool pump?

#### REGARDING THE MANUFACTURER/INSTALLER

Are they accredited by CanSia and CAA-Habitation?

Is it possible to visit one of their previous installations?

#### REGARDING THE SOLAR PANELS

Does the solar panels are tested by independent labs such as CSA, FSEC OR SRCC?

How many solar panels will be required?

What is the size of those solar panels?

What is the average lifespan of a solar panel?

What is the length of the warranty?

Does the warranty cover the repair and replacement of solar panels and/or accessories?

In the event of a repair or replacement, does the warranty cover the costs of labor and/or shipping?

# TechnoSolis

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