

# POOL HEATER SIZING QUESTIONS

1-19-2015

In order to most efficiently size a pool heater accurately for you, please provide the following information.

## **Where will the pool be located?**

Please provide city and state. We have climate models for many cities. It is more important to select a climate close to your location than to be geographically close.

State \_\_\_\_\_ City \_\_\_\_\_

## **Is this a commercial or residential installation?**

Building code requirements prohibit the use of residential-grade units over 200,000 BTUH input on a commercial installation. Units over 400,000 BTUH are all built as commercial.

Residential \_\_\_\_\_ Commercial \_\_\_\_\_

## **At what elevation is the pool located?**

Combustion is affected by the changes in oxygen content at elevation, so it needs to be taken into account. Elevations below 2000' are considered sea-level. Elevations above 2000' will affect the output of the unit and runtime; a larger heater may be required.

\_\_\_\_\_ ft.

## **What are the dimensions of the pool?**

Surface area and depth, or total # of gallons and an idea of average depth.

\_\_\_\_\_ Length \_\_\_\_\_ total gallons  
\_\_\_\_\_ Width \_\_\_\_\_ average depth  
\_\_\_\_\_ Surface Area of Pool

## **What pool temperature do you want to maintain?**

\_\_\_\_\_ °F

common temperatures:

recreational swimming, 82-83F for commercial installations.

Residential installations may be higher than 82F depending on the user's comfort level.

athletic training, 78-80F

therapy, 85-87F or higher

## **What fuel?**

## **What rate?**

We can estimate running costs.

\_\_\_\_\_ natural gas \$ \_\_\_\_\_ per therm  
\_\_\_\_\_ propane \$ \_\_\_\_\_ per gallon  
\_\_\_\_\_ electric only \$ \_\_\_\_\_ per kilowatt-hour (kWh)

## **Will the heater be located indoors or outdoors?**

Certain models must be indoor.

\_\_\_ Indoor \_\_\_\_\_ Outdoor



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## **How exposed is the pool to wind/sun/shade? Is it indoors?**

This affects evaporative losses. Indoor pools have dramatically lower evaporative losses.

### Sunshine

- Full sun
- Mostly sun with some screening
- Mostly sun with some shade
- Mostly screened or shaded
- Full shade
- Pool is indoors

### Average Windspeed at the pool

- Low, 0-3.5 MPH
- Medium, 3.5-10 MPH
- High, over 10 MPH
- Climate controlled / indoors

## **Will there be a cover on the pool, and how often?**

Pool covers are a huge energy savings.

- No cover on the pool
- Pool is generally covered overnight
- Pool is covered whenever it is not in use

## **Over what portion of the year will the pool be in use?**

Combined with the climate model, this gives us an idea of the heat losses to expect.

- year-round
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

## **What is the local groundwater temperature?**

This establishes both the temperature starting point and how much the pool temperature will drop over time.

°F

## **How many heaters do you want to use for this installation?**

It isn't always practical to use a single heater; having multiple units provides a backup if one needs repair. We'll advise on how much heat you need, but whether that amount of heat is supplied by a single heater or multiple is largely your decision.

- must have a single heater
- must have multiple heaters
- prefer a single heater
- prefer multiple heaters
- prefer at least one heater to be a backup system.



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