HOT TUB PATIO

Pool Heating Quick Reference

Use pool gallons, temperature rise, and heater output to plan your warm-up time.

Core Formula

BTUs required = gallons x 8.34 x temperature rise (°F)

Heating hours = BTUs required / delivered BTU per hour

Ideal Heating Time for a 10°F Increase at 300,000 BTU/hr

Pool volume	BTUs needed	Ideal time
5,000 gal	417,000 BTU	1.4 hr
10,000 gal	834,000 BTU	2.8 hr
15,000 gal	1,251,000 BTU	4.2 hr
20,000 gal	1,668,000 BTU	5.6 hr

Method Snapshot

Gas heater	Usually the fastest common option for same-day heating.
Heat pump	Better when you can start earlier and maintain temperature.
Solar heating	Lower operating cost potential, but slower and weather-dependent.
Physical cover	Does not create heat. It helps keep added heat from escaping.

Fast-Heating Checklist

- [ ] Confirm pool gallons before estimating time
- [ ] Measure the actual starting temperature
- [ ] Use the heater output listed by the manufacturer
- [ ] Cover the pool whenever it is not being used
- [ ] Reduce wind across the water when practical
- [ ] Start earlier than the ideal formula suggests

Planning note

The formula gives a baseline only. Wind, evaporation, outdoor temperature, plumbing, and heater performance can extend actual warm-up time.