

Dwelling Hot Tub Load Calculator

Compare entered hot-tub component load with entered circuit capacity while keeping protection and bonding review separate.

Generated October 10, 2026

<https://www.elecatrix.com/residential-load-service/dwelling-hot-tub-load-calculator/>

Inputs

Input	Value	Unit
Hot tub heater load	5.5	kW
Hot tub pump load	1.2	kW
Blower load	0.7	kW
Hot tub lighting load	0.2	kW
Entered simultaneous factor	100	%
Entered circuit capacity	9.6	kW

Results

Result	Value	Unit
Connected hot tub load	7.6	kW
Entered simultaneous demand	7.6	kW
Circuit capacity margin	2	kW

Calculation details

Detail	Value	Unit
Calculation basis	Equipment screen sums entered component loads and applies the entered simultaneous factor.	
Review boundary	Planning worksheet only; no spa disconnect, breaker, GFCI, bonding, manufacturer, or code-compliance approval is made.	

Formulas

connected hot tub load = sum of entered component loads

planning demand = connected load x simultaneous percent / 100

capacity margin = entered capacity - planning demand

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Warnings and limitations

This hot tub load screen does not select a spa disconnect, breaker, GFCI protection, bonding method, conductor, model compatibility, or final installation approval.