

Electrician Wiring Guide

Endless Pools® Swim Spas

East Texas Hot Tub Company

Tyler & Longview, Texas

(903) 561-7727 • easttexashottub.com

All Endless Pools swim spas require 230V permanently connected service. There is no plug-in option. A licensed electrician and a subpanel with GFCI breakers are required for every model. The subpanel is mandatory per Watkins Manufacturing Corporation requirements.

Quick Reference — All Models

Series	Models	Main Breaker	Draw	Feed Wire	Subpanel Breakers	Circuits to Unit
E Series	E500, E550, E700, E2000	60A	48A	#6 AWG	2 x 30A GFCI	2
X200, X500	X200, X500	60A	48A	#6 AWG	60A GFCI	1
X2000	X2000	60A	48A	#6 AWG	2 x 30A GFCI	3 (via gang box)
R Series	R200, R500	30A	24A	#8 AWG	1 x 30A GFCI	1

E Series — E500, E550, E700, E2000

Main Electrical Panel

Specification	Requirement
Voltage	230 VAC, single phase, 60 Hz
Main breaker	60 amp, 2-pole, NON-GFCI
Circuit type	Dedicated — no other loads

Wire Sizes — Main Panel to Subpanel

For runs under 100 feet. All conductors must be copper, rated for 75°C/167°F.

Wire	Gauge (AWG)	Color
Line 1 (L1)	#6 AWG copper	Blue
Line 2 (L2)	#6 AWG copper	Red
Neutral	#6 AWG copper	White
Ground	#6 AWG copper	Green

Subpanel Configuration

Contains two 30-amp GFCI breakers (P/N 304130). Two separate circuits run from the subpanel to the swim spa junction box.

Circuit	Wire	Gauge	Color
Circuit 1 (30A GFCI)	L1	#10 AWG	Blue
	L2	#10 AWG	Red
Circuit 2 (30A GFCI)	L1	#10 AWG	Blue
	L2	#10 AWG	Red
	Neutral	#10 AWG	White

	Ground	#10 AWG	Green
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X200 & X500 — SwimCross Exercise Systems

Main Electrical Panel

Specification	Requirement
Main breaker	60 amp, 2-pole, NON-GFCI

Wire Sizes — Main Panel to Subpanel

Wire	Gauge (AWG)	Color
Line 1 (L1)	#6 AWG copper	Black
Line 2 (L2)	#6 AWG copper	Red
Neutral	#6 AWG copper	White
Ground	#6 AWG copper	Green

Note: X Series uses Black for L1 (not Blue like E Series).

Subpanel Configuration

Contains a **60-amp GFCI breaker**. A single circuit runs to the Gecko Ye-5 heater/controller.

Wire	Gauge	Color
L1	#10 AWG	Black
L2	#10 AWG	Red
Neutral	#10 AWG	White
Ground	#10 AWG	Green

X2000 — SwimCross Dual-Zone System

The X2000 is the most complex installation. It has two separate zones (swim area + spa area) with separate control boxes, requiring three circuits routed through a gang box.

Main Electrical Panel

Specification	Requirement
Main breaker	60 amp, 2-pole, NON-GFCI

Wire — Main Panel to Subpanel

Wire	Gauge	Color
L1	#6 AWG copper	Black
L2	#6 AWG copper	Red
Neutral	#6 AWG copper	White
Ground	#6 AWG copper	Green

Subpanel & Routing

Contains **two 30-amp GFCI breakers**. Three circuits run through a single conduit to a **gang box**, then split to two separate control boxes:

- **Swim Control Box** — internal conduit 1x
- **Spa Control Box** — internal conduit 2x

All circuit wiring: **#10 AWG** copper.

R Series — R200 & R500 (RecSport)

The R Series is the simplest and most affordable to wire. Lower power draw (24A vs 48A) means smaller wire, smaller breaker, and lower installation cost.

Main Electrical Panel

Specification	Requirement
Main breaker	30 amp, 2-pole, NON-GFCI

Wire Sizes — Main Panel to Subpanel

Wire	Gauge (AWG)	Color
Line 1 (L1)	#8 AWG copper	Black
Line 2 (L2)	#8 AWG copper	Red
Neutral	#8 AWG copper	White

Ground	#8 AWG copper	Green
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Subpanel Configuration

Contains **one 30-amp GFCI breaker** (P/N 304422). Single circuit to Gecko Ye-5 heater/controller.

Wire	Gauge	Color
L1	#10 AWG	Black
L2	#10 AWG	Red
Neutral	#10 AWG	White
Ground	#10 AWG	Green

Universal Requirements — All Endless Pools Models

Subpanel Placement

Requirement	Detail
Minimum distance	5 feet from system (NEC 680-38 to 41-A-3)
Maximum distance	50 feet
Max main panel to subpanel	100 feet (longer runs require larger wire)
Accessibility	Readily accessible, within line of sight

Bonding Requirements (NEC Article 680)

- Minimum **#6 AWG solid copper bonding conductor** to all metal within 5 feet of the system (metal ladders, water pipes, metal equipment, conduit).
- If the system is within 5 feet of a metal surface, that surface must be bonded with minimum **#8 AWG solid copper** to the heater terminal block bonding connector.
- Bonding terminal (pressure wire connector) is on the control box.

Conduit

Use **liquid-tight flex conduit fitting** when connecting supply conduit to the system.

⚠ CRITICAL WARNINGS

- **ALL WIRING MUST BE COPPER** — supply wires rated for 75°C/167°F.
- Do not remove or bypass GFCI breakers — **voids warranty** and creates unsafe installation.
- **Fill the swim spa with water BEFORE turning on power.**
- No other appliances on the same circuit.

GFCI Testing (All Models)

1. Press **TEST** on each GFCI breaker — it should click to OFF.
2. Wait **30 seconds**, push fully OFF, then back to ON.
3. If the GFCI fails to trip, **disconnect power immediately** — indicates electrical fault.

Permit & Inspection

Most Texas cities and counties require an electrical permit for new 230V dedicated circuits. The installation must comply with the National Electrical Code (NEC Article 680, ANSI/NFPA 70) and all applicable local codes.

Questions? Call East Texas Hot Tub at **(903) 561-7727** or email **tuckerg@ilovemyspa.com**. We can recommend licensed electricians in the Tyler and Longview area.

This guide is provided as a reference for licensed electricians. Always refer to the swim spa owner's manual and the National Electrical Code for complete requirements.

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