

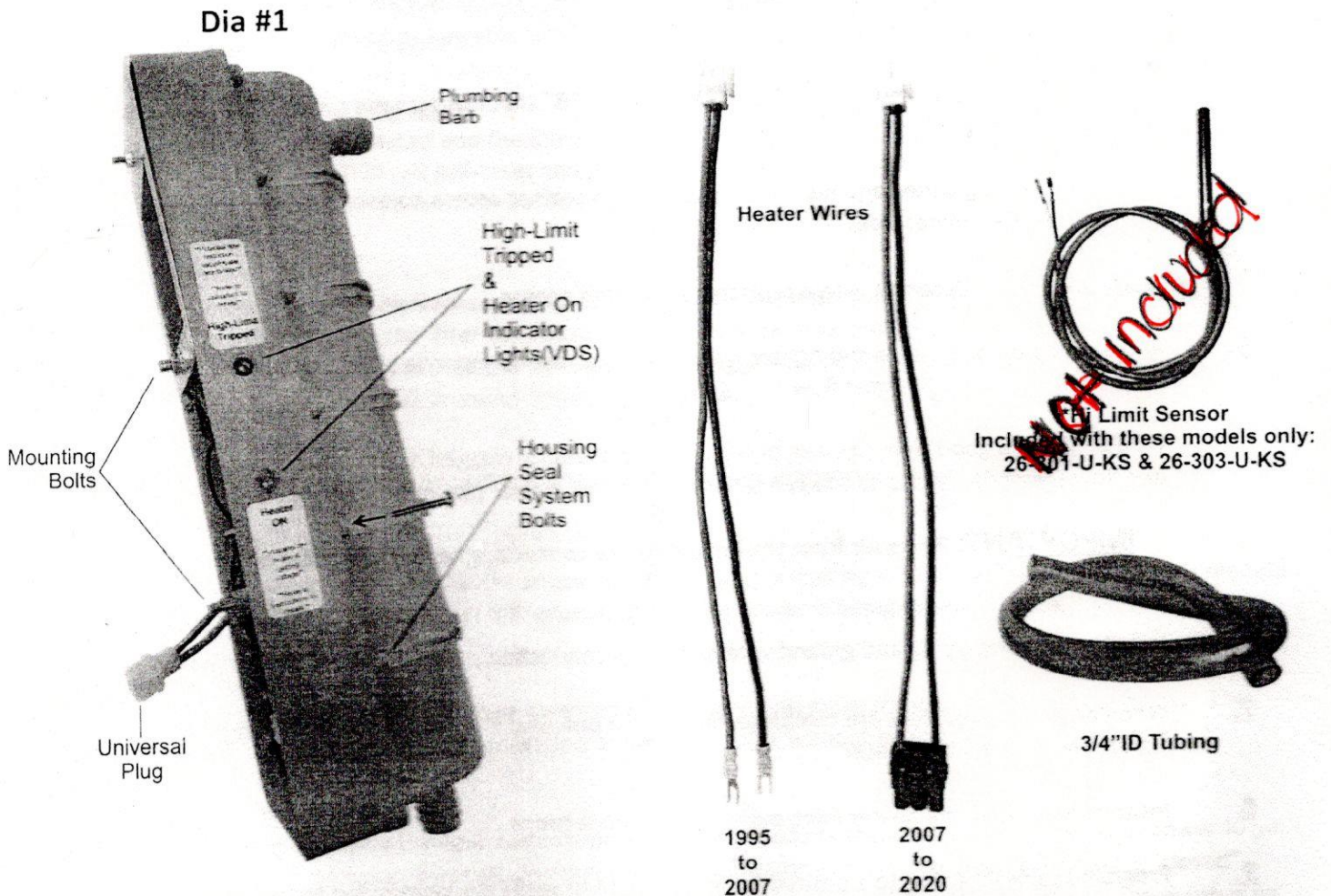
# Water Pro Series "Smart" Heater

## Installation Instructions



- Featuring:
- ✓ Universal Adaptor Plug Wiring
  - ✓ Visual Diagnostic System lights "VDS"
  - ✓ Replaceable Titanium element

HQ PT#	kW	Heater Cross Reference	Date Used
26-310-U-K	5.5	Replaces: 58336, 26-3314-1-7T-K, 26-3411-1-7T-K, 6500-310, 6500-316, 6500-843, C3314-1, C3411-1	2007 - 2020
26-301-U-KS*	5.5	Replaces: 58030, 2-00-0066, 46-555-1000, 6500-301, 9143E, C2783-1, E2550-1000, HTR6500301, SD6500-301	1995 - 2007
26-315-U-K	2.7	Replaces: 58335, 26-3403-1-BT-K, 6500-315, 6500-844	2007 - 2020
26-303-U-KS*	2.7	Replaces: 6500-303, E2270-1000	1995 - 2007



**WARNING!** This heater should be installed by a licensed electrician or qualified pool/spa technician. If you're not qualified or lack the technical experience to install this product **STOP!** and contact your heater provider for assistance

**WARNING!** Removing the product label, disassembling, altering, damaging or subjecting heater to dry fire will void the product warranty

## PRECHECK

- Read through these instructions completely, prior to performing work.
- Inspect for shipping or other damage. **Do Not attempt to install a heater that appears damaged or missing parts**
- Confirm you have received the correct replacement heater using the cross reference chart and heater data label
- It is the installer responsibility to confirm the flow switch, electronic high limit, wiring connections, circulation pump are operating correctly once the new heat is installed. Damage to the heater caused by faulty equipment or improper installation are not covered by the limited warranty
- Save a copy of these instructions.

## STEPS FOR A SUCCESSFUL INSTALLATION

- 1.** Set the spa temperature to off and turn off spas circuit breaker. Using a voltmeter, confirm the electrical power has been disconnected to the spa before performing this service. Drain spa water or pinch water supply tubing to stop water from draining while performing heater replacement
- 2.** Carefully disconnect heater power and ground wires, high limit sensor and water supply tubing from the existing heater. Remove heater mounting nuts from cabinet sidewall and remove old heater
- 3.** Install the provided universal adaptor plug "A" or "B" that matches the connection on original heater (ref **Dia #1**)
- 4.** Run universal plug wiring and high limit cord through cabinet access holes and mount the new heater assembly to the cabinet sidewall.

Heater 26-301-U-KS comes with a replacement hi limit sensor.

- 5.** Reconnect plumbing tubes and tighten clamps for leak free connection to heater barbs. Refill spa or remove tubing pinches to allow water flow

**NOTE** This is a good time to clean or replace your filters, as clogged or dirty filters and inspect circ pump and flow switch for debris as this can reduce water flow and/or prevent proper heater circuit operation.

### **IMPORTANT:** Purge air from the heater before connecting heater electrical wires to terminal

- 6.** Install power wires/plug and ground wire to original connection points on board or terminal strip
- 7.** When all installation steps are complete, restore spa power at the breaker, turn on pumps and confirm water flow through the heater
- 8.** Inspect for leaks at the heater inlet/outlet tubing connections
- 9.** Program spa heat setting to a desired temperature, then verify the system and heater operate properly together by using the "VDS" amber light in the operations section of this manual



## OPERATION - TROUBLESHOOTING - TERMINOLOGY

### Amber light is "ON"

Indicates heater is operating with power being supplied to the element. This Amber light should be on when the spa control makes a heat call. (Ref. What Is a Heat Call) Test the spa control and heater operation by raising and lowering the temperature, making sure the Amber light only comes on when there is a heat call.

### Amber light is "ON" but water is not warming up

It takes a while for water to warm, but if there is no temperature rise after 3 hours during continuous operation, you may have other issues. Use your spa manual and/or contact your heater provider for troubleshooting

### Amber light goes on/off intermittently during consistent heat call

- a. Symptom of low water flow, or air pockets/bubbles in heater (Ref. Causes of Low Water Flow)
- b. Circulation pump is going off/on or has not primed
- c. Flow switch problems

### Amber light is "OFF" when system makes a heat call and pump is running

You may also see a "FLO" or other icon on the topside indicating the flow switch is not closing

- a. If the VDS Red heater light is on (Ref. subject Red Light is "On")
- b. You may have low or no water flow (Ref. Causes of Low Water Flow)

### Amber light is "ON" when spa control is not calling for heat or when circ pump is not running

Spa control system has a stuck heater relay or contactor. Switch off the main breaker to the spa immediately and contact a local pool/ spa service agent.

### Red light is "ON" (high limit trip light)

Indicates the heater has overheated and the integral Thermal Cut Off device "TCO" has tripped and disconnected power to the element. The TCO will self-reset and the red light will go off after the water inside has cooled off. Ref. Causes of Low Water Flow to identify reasons the TCO has tripped

### Causes of low water flow

One or more of the following conditions can reduce the circulation pumps water flow below 6gpm

- a. Low spa water level or air in the filter can cause the pump to suck in air bubbles and loose prime
- b. Dirty spa filter, kinks or obstruction in the plumbing tube, clogged ozone injector, valve closed etc.
- c. Circulation pump is going on/off, or pump impeller is clogged

### Leaking heater

Confirm clamps are tight on barb connections. Inspect for debris or split in plumbing tubes.

### What is a heat call?

When there is a demand for a higher water temperature, the term is making a "heat call". Your spa owner's manual will explain the topside light or icon that will appear, confirming power is being supplied to the heater.

### What are VDS lights?

VDS stands for the Visual Diagnostic System invented by HydroQuip to make troubleshooting fast and easy. The colored light system will confirm heater operation or display trouble without having to use a multi-meter

### What is a "closed" flow switch?

A running circ. pumps will close the flow switch's electrical contact points together, allowing electrical power to pass through the switch and complete a circuit. The correct terminology for a connected electrical circuit is "closed"  
Note the flow switch circuit should always be "open" when the circ. pump is off and "closed" when the pump is on