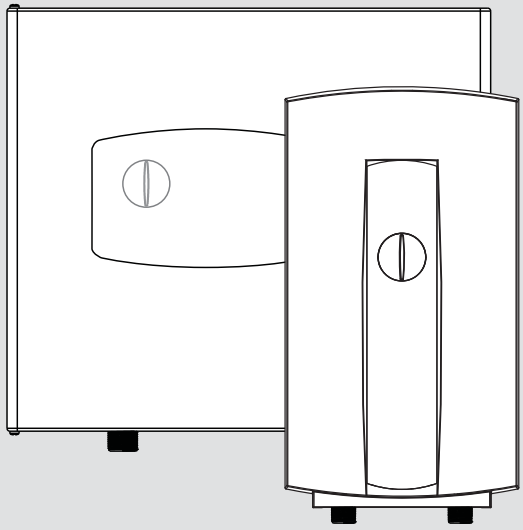
OPERATION AND INSTALLATION
UTILISATION ET INSTALLATION

Electric Modulating Micro-Boiler

- » HydroShark 7
- » HydroShark 10
- » HydroShark 12
- » HydroShark 14
- » HydroShark 19
- » HydroShark 24
- » HydroShark 29
- » HydroShark 36



HydroShark 7 - HydroShark 10:

Conforms to ANSI/UL Std. 499
Certified to CAN/CSA Std. E335-1 & E335-2-35

Conforme à la norme ANSI/UL Std. 499
Certifié à la norme CAN/CSA Std. E335-1 & E335-2-35

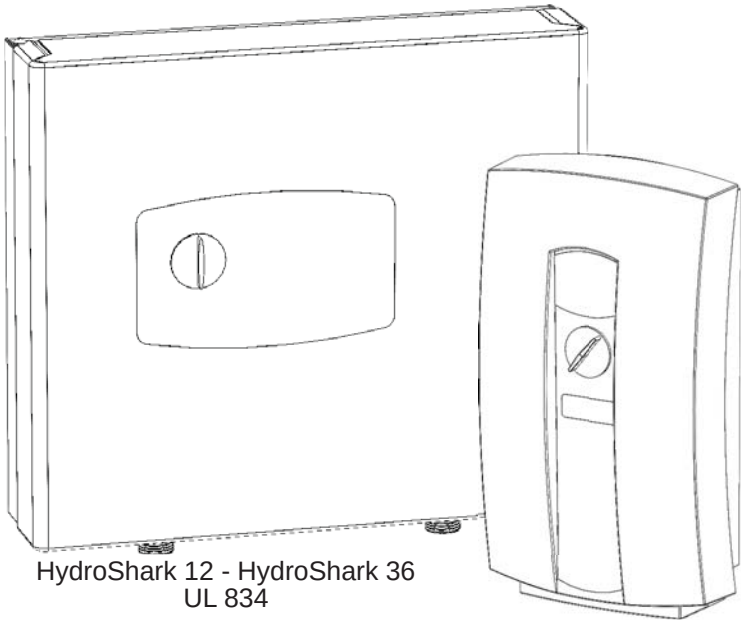
HydroShark 12 - HydroShark 36:

Conforms to ANSI/UL Std. 834
Certified to CAN/CSA C22.2 No 64

Conforme à la norme ANSI/UL Std. 834
Certifié à la norme CAN/CSA C22.2 No 64

STIEBEL ELTRON

HydroShark Electric Boiler (7-36 KW) Installation Manual and Owner's Guide



HydroShark 12 - HydroShark 36
UL 834

HydroShark 7 - HydroShark 10
UL 499

Do not return to stores. Damages or repairs call Stiebel Eltron 800.805.5384

The **HydroShark** Electric Boiler features advanced technology, impressive energy-saving performance, and a compact design. Exclusively manufactured by Stiebel Eltron, a leader in heating technologies for the past 80 years.

Featuring

- Efficiency: 100 %
- Wall Hung
- Flow Activated: .5 GPM
- Copper Heating Vessel
- Temperature Range: 86°-140° F*
- No Venting Required
- Modulation Status LED

STIEBEL ELTRON

Models:

HydroShark 7
HydroShark 10
HydroShark 12
HydroShark 14
HydroShark 19
HydroShark 24
HydroShark 29
HydroShark 36

If you have any questions, please call or write to:
17 West St.
West Hatfield, MA 01088

CONTENTS

Installation Manual

OWNER'S GUIDE

IMPORTANT!

BOILERS ARE TO BE USED FOR RADIANT FLOOR HEATING ONLY!**

THIS MANUAL MUST BE READ CAREFULLY BEFORE ATTEMPTING TO INSTALL THE HydroShark BOILERS. IF YOU DO NOT FOLLOW THE SAFETY RULES OR THE INSTRUCTIONS OUTLINED IN THIS MANUAL, THE UNIT MAY NOT OPERATE PROPERLY AND IT COULD CAUSE PROPERTY DAMAGE, SERIOUS BODILY INJURY AND/OR DEATH.

MANUFACTURER WILL NOT BE LIABLE FOR ANY DAMAGES BECAUSE OF FAILURE TO COMPLY WITH INSTALLATION AND OPERATING INSTRUCTIONS OUTLINED IN THIS MANUAL OR BECAUSE OF IMPROPER USE. IMPROPER USE INCLUDES THE USE FOR THIS APPLIANCE TO HEAT ANY LIQUID OTHER THAN WATER OR PROPYLENE GLYCOL. FAILURE TO COMPLY WITH THE INSTALLATION AND OPERATING INSTRUCTIONS OR IMPROPER USE VOIDS THE WARRANTY. NEVER REMOVE THE UNITS FRONT COVER UNLESS POWER IS TURNED OFF.

IF YOU HAVE ANY QUESTIONS REGARDING THE INSTALLATION OR OPERATION OF THESE BOILER, PLEASE CALL OUR TECHNICAL SERVICE LINE AT 800.805.5384.

**Unless when used with Stiebel Eltron DHW Integrator Panels (Use HydroShark 29 or HydroShark 36 KW Boilers only with Combi Panel Systems, Size boilers accordingly)

Installation Manual

CONGRATULATIONS

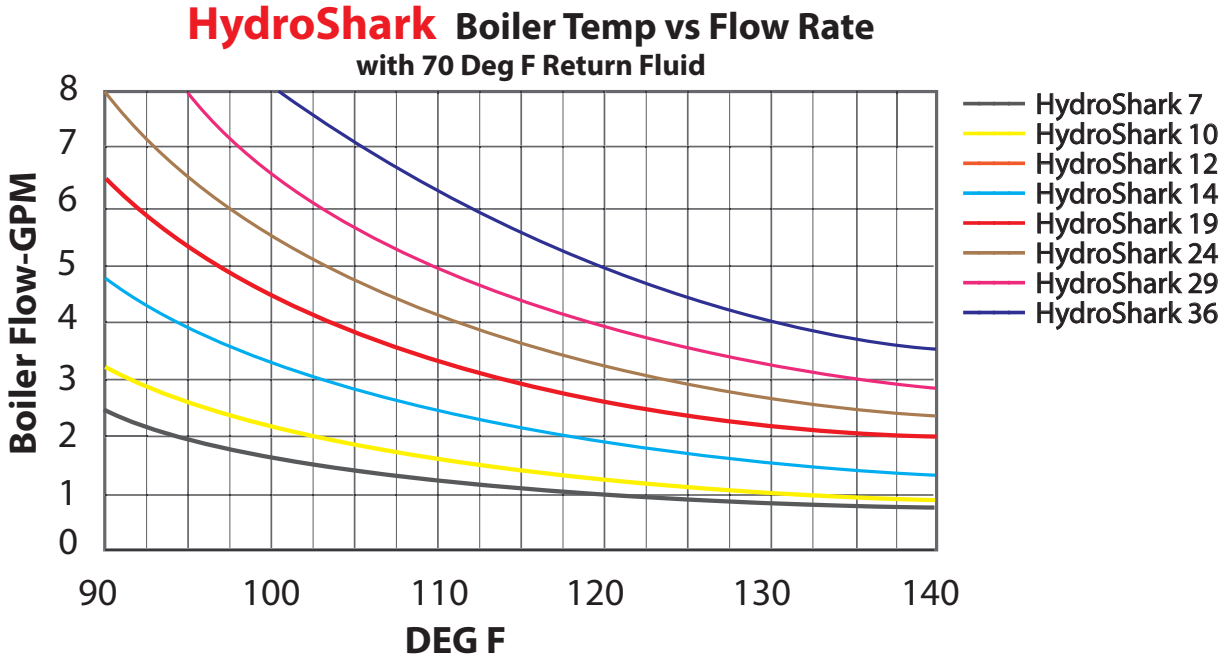
Congratulations and thank you for choosing our micro boiler. Before use, we recommend that you read through this installation manual carefully. Keep this manual for future reference.

If you need an additional manual, contact the manufacturer or your local distributor. When you call, please tell us the product name and the serial number of your unit written on the rating plate of the boiler.

SPECIFICATIONS

HYDROSHARK

MODEL	KW	VOLTS	WIRE SIZE	AMP DRAW (MAX)	DBL POLE BREAKER SIZE	BTU	WATER TEMP RANGE
HydroShark 7	7	240	8	30	(1) 40	24,573	86° - 140° F
HydroShark 10	10		6	40	(1) 50	32,765	
HydroShark 12	12		4	50	(1) 70	40,956	
HydroShark 14	14		2 x 8	60	(2) 40	49,147	
HydroShark 19	19		2 x 6	80	(2) 50	65,526	
HydroShark 24	24		2 x 4	100	(2) 70	81,912	
HydroShark 29	29		3 x 6	120	(3) 50	98,977	
HydroShark 36	36		3 x 4	150	(3) 70	122,868	



INTRODUCTION

IMPORTANT!

Read this entire manual. Failure to follow all the guides, instructions and rules could cause personal injury or property damage. Improper installation, adjustment, alteration, service and use of this unit can result in serious injury.

This unit must be installed by a licensed electrician and plumber. The installation must comply with all national, state and local plumbing and electric codes. Proper installation is the responsibility of the installer. Failure to comply with the installation and operating instructions or improper use voids the warranty.

Save these instructions for future reference. Installer should leave these instructions with the consumer.

If you have any questions regarding the installation, use or operation of this micro boiler, or if you need any additional installation manuals call Stiebel Eltron at 800.805.5384 or visit us online at www.hydro-shark.com

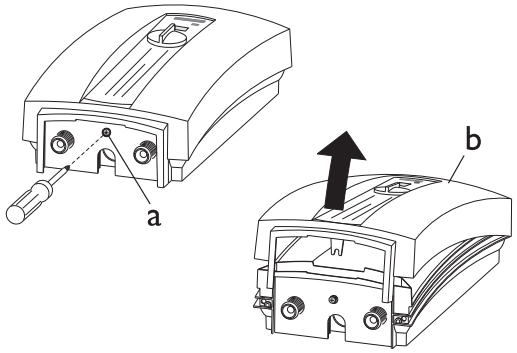
GENERAL

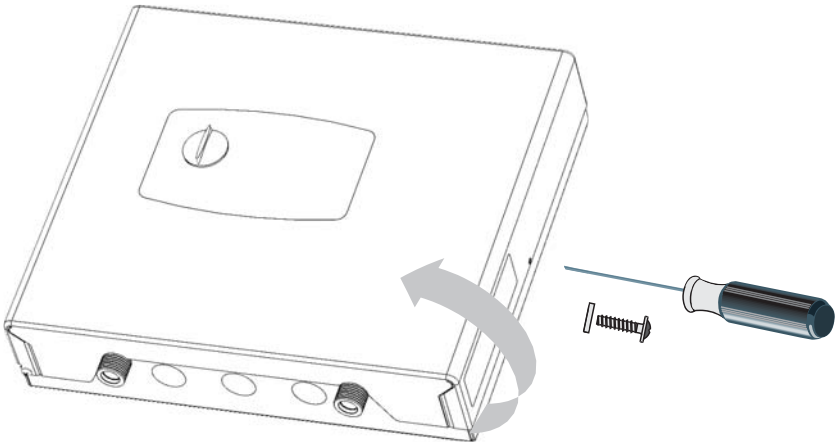
- The output of heat from the boiler is electronically controlled. The boiler will deliver any water temperature between 86° F - 140° F. Set the desired water delivery temperature using the knob on the front cover. **(Do not exceed temperatures above 130° when using this product with tubing in concrete)**
- When the power light **is** flashing, full element power is being applied. When the power light **is not** flashing, the element power is being modulated to the water delivery temperature.
- Recommend setting for radiant floor heating (Tubing in Concrete) is 105° F - 125° F.
- Recommended setting for Staple Up (Floor Warming Only) is 130° - 140° F.
- Temperature setting and water delivery temperatures may vary depending on flow rates. Size boiler accordingly. See flow rate chart for more information.

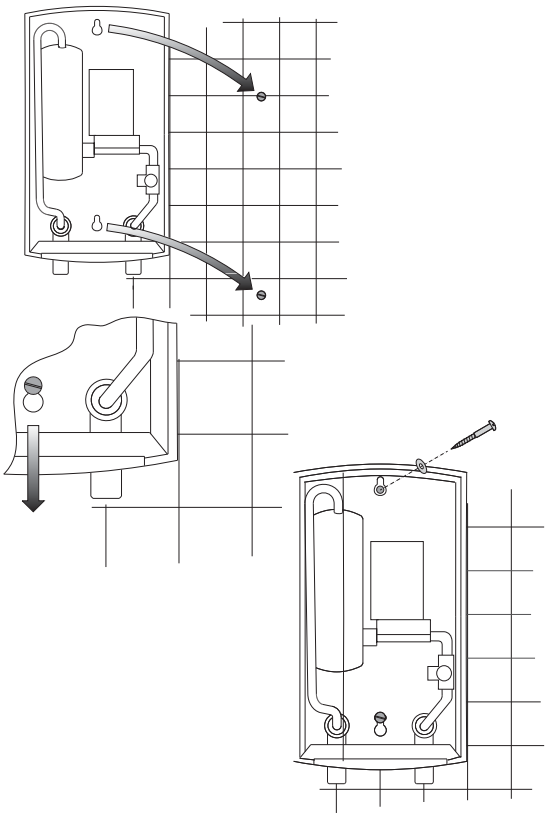
MOUNTING THE UNIT

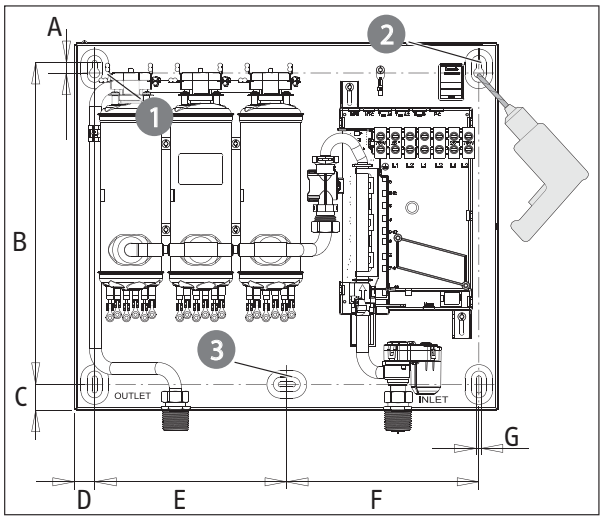
UNIT MUST BE INSTALLED IN A VERTICAL POSITION WITH THE WATER FITTINGS POINTING DOWNWARD. DO NOT INSTALL UNIT WHERE IT WOULD ROUTINELY BE SPLASHED WITH WATER OR ELECTRICAL SHOCK MAY RESULT.

1. Leave a minimum of 5” clearance on all sides for servicing.
2. Make sure the power is off.
3. Remove the cover.
4. Mount securely to wall by putting screws through mounting holes.
5. Screws and plastic wall anchors for mounting are provided.









Dimensions	
A	3/8″ / 10 mm
B	12 1/2″ / 318 mm
C	1″ / 26 mm
D	3/4″ / 19.5 mm
E	7 1/2″ / 190 mm
F	7 1/2″ / 190 mm
G	3/16″ / 5 mm

INSTALLATION

ELECTRICAL CONNECTIONS

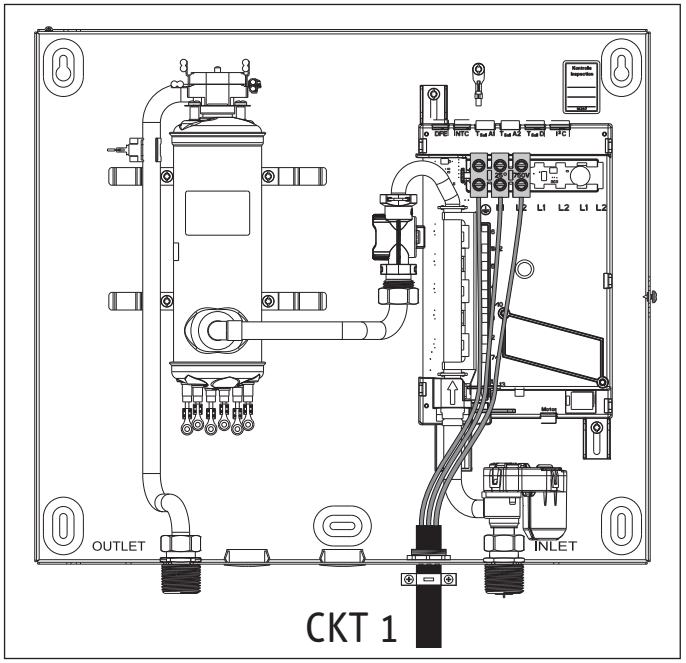
WARNING: BEFORE BEGINNING ANY WORK ON THE ELECTRIC INSTALLATION, BE SURE THAT THE MAIN BREAKER PANEL SWITCHES ARE “OFF” TO AVOID ANY DANGER OF ELECTRIC SHOCK. ALL MOUNTING AND PLUMBING MUST BE COMPLETED BEFORE PROCEEDING WITH ELECTRICAL HOOK-UP. WHERE REQUIRED BY LOCAL,STATE OR NATIONAL ELECTRICAL CODES THE CIRCUITS SHOULD BE EQUIPPED WITH A “ GROUND FAULT INTERRUPTER”.

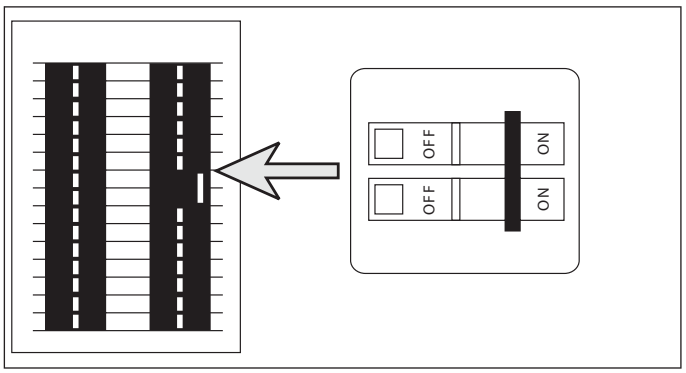
1. All electrical work must comply with the national, state, local & any other applicable codes.
2. The boiler should be connected to properly grounded dedicated branch circuits of proper voltage rating. Ground must be brought to the ‘Ground’ at the circuit breaker panel.
3. HydroShark 12 can be connected to ONE independent circuit.
4. A HydroShark 14, HydroShark 19 & HydroShark 24 can be connected to TWO independent circuits Use supply table. Protected by TWO double pole breakers sized for the load.
5. A HydroShark 29 and HydroShark 36, can be connected to THREE independent circuits. Use supply cable protected by THREE double pole breakers sized for the load.
6. Cut the electrical connection cable to length and strip.
7. The wire must be fed through the knockouts located between the Supply and Return fluid connections. The “Live” wires must be connected to the slots on the terminal block marked “L” and “L”. The ground wire must be connected to slot marked with the ground symbol.
8. Reinstall the cover screws.

WARNING! As with any electrical appliance, failure to electrically ground may result in serious injury or Death.

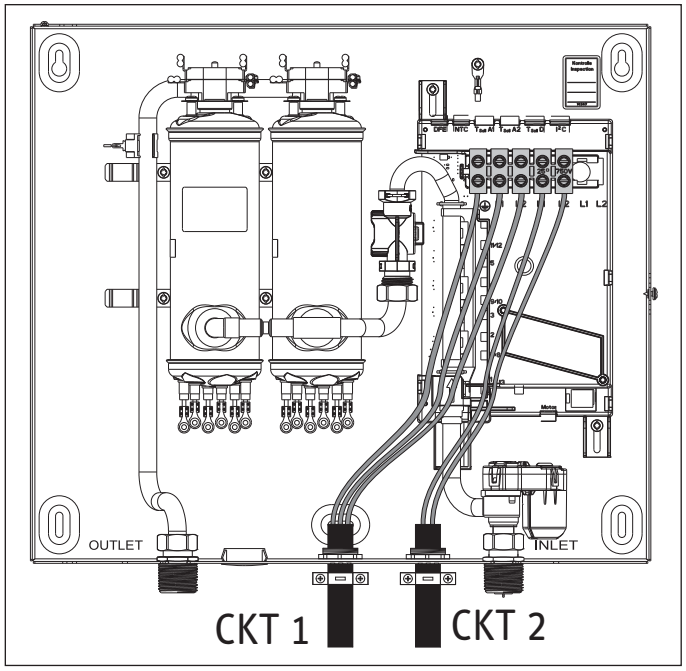
ELECTRICAL CONNECTIONS CONT'D

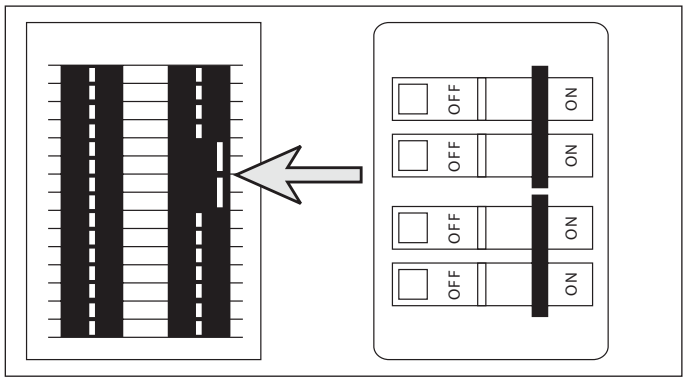
HydroShark 12





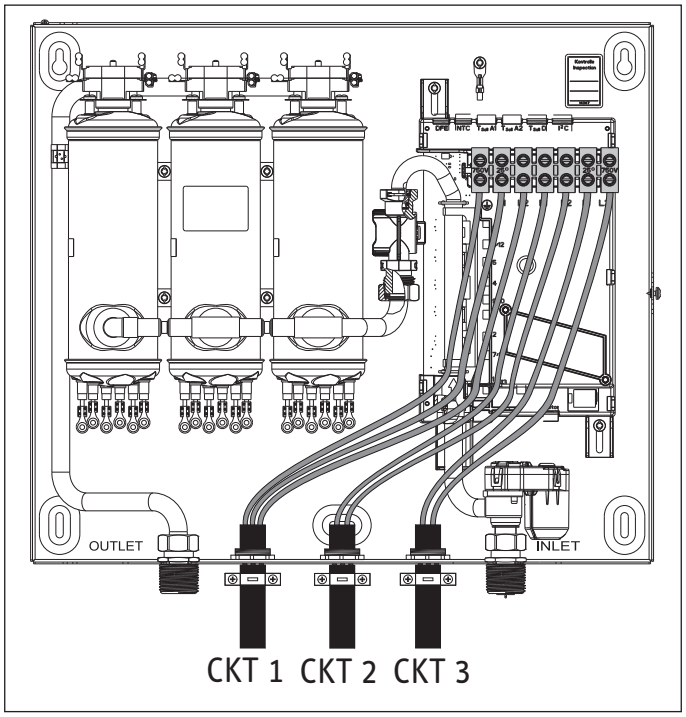
HydroShark 14, 19, 24

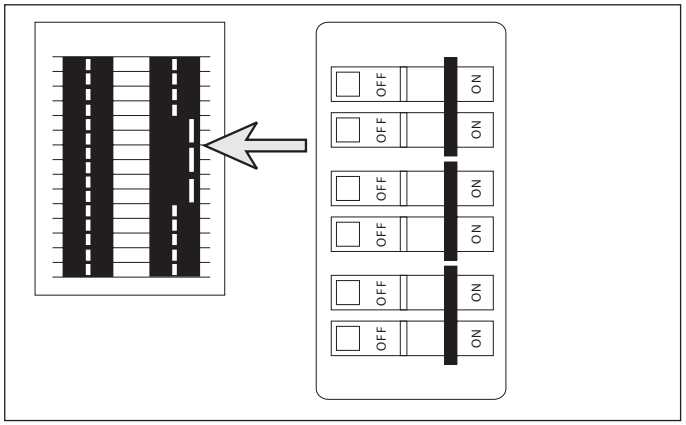




ELECTRICAL CONNECTIONS CONT'D

HydroShark 29, 36





CIRCUIT CONNECTION

Please refer to specification table for wiring and circuit breaker size. See technical data section for wiring diagrams.

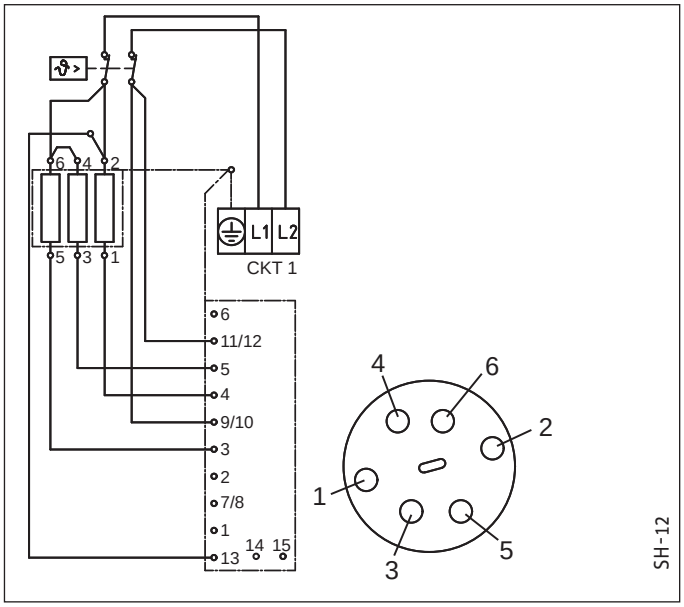
FLUID CONNECTIONS

NOTE: EXCESSIVE HEAT FROM SOLDERING COPPER PIPES NEAR THE BOILER MAY CAUSE DAMAGE.

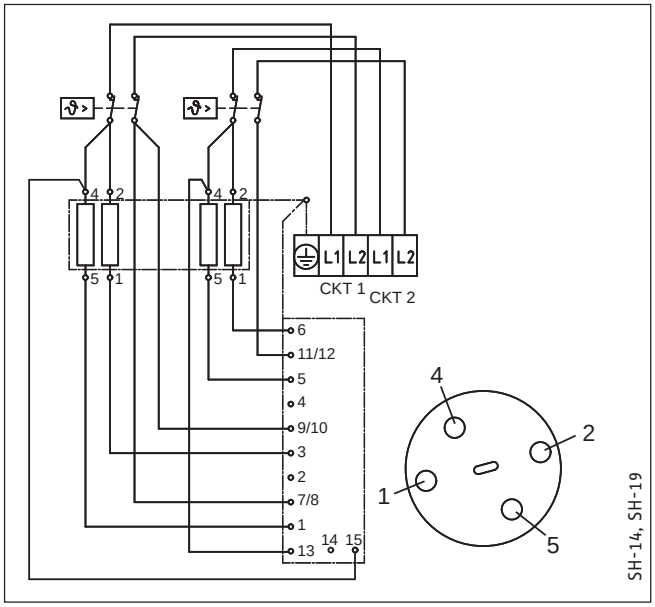
1. All plumbing work must comply with the national, state, local & any other applicable codes.
2. Make sure the radiant floor system has been purged & is free of floating debris.
3. The return side (inlet) is on the right side of the unit, the supply side (outlet) is on the left of the unit.
4. A pressure & temperature relief valve should be installed on the hot water supply side (outlet) of the unit. (Stiebel Eltron Pre-Plumbed Panels include pressure relief valve)
5. The boiler is designed for a connection to copper tubing and/or PEX tubing. If soldering the unit is necessary, please direct the flame away from the housing of the unit to avoid damage.
6. When all plumbing work is completed, check for leaks & take corrective action before proceeding.

TECHNICAL DATA

WIRING DIAGRAMS

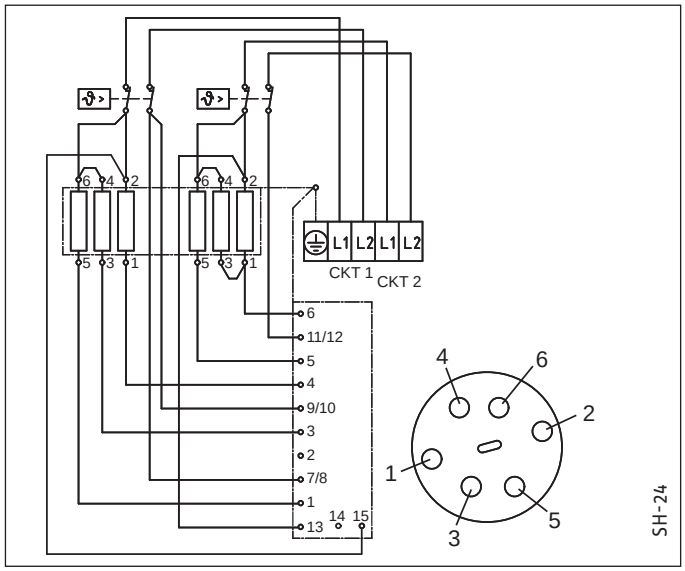


HydroShark 12

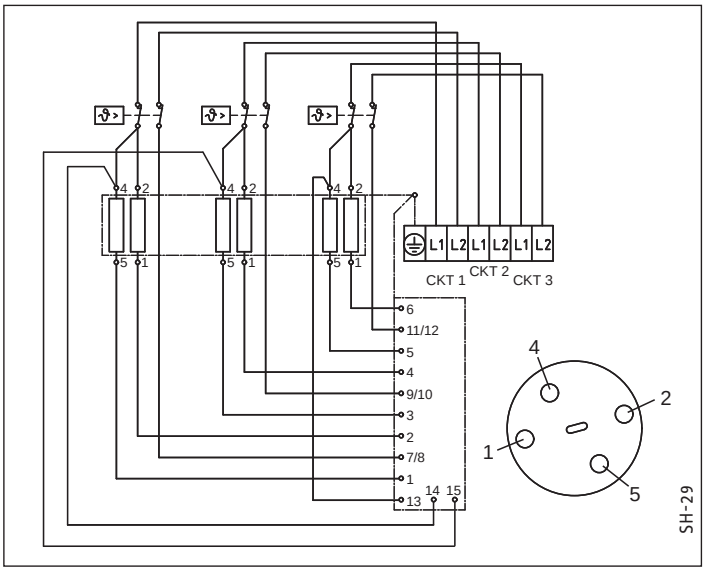


HydroShark 14,19

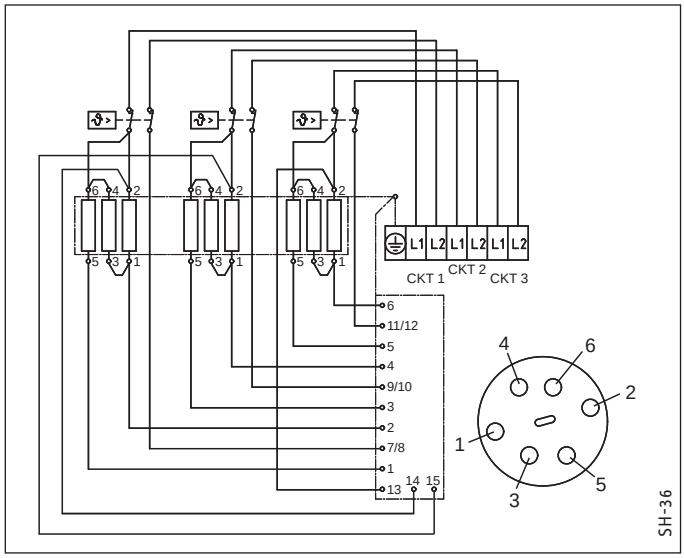
WIRING DIAGRAMS



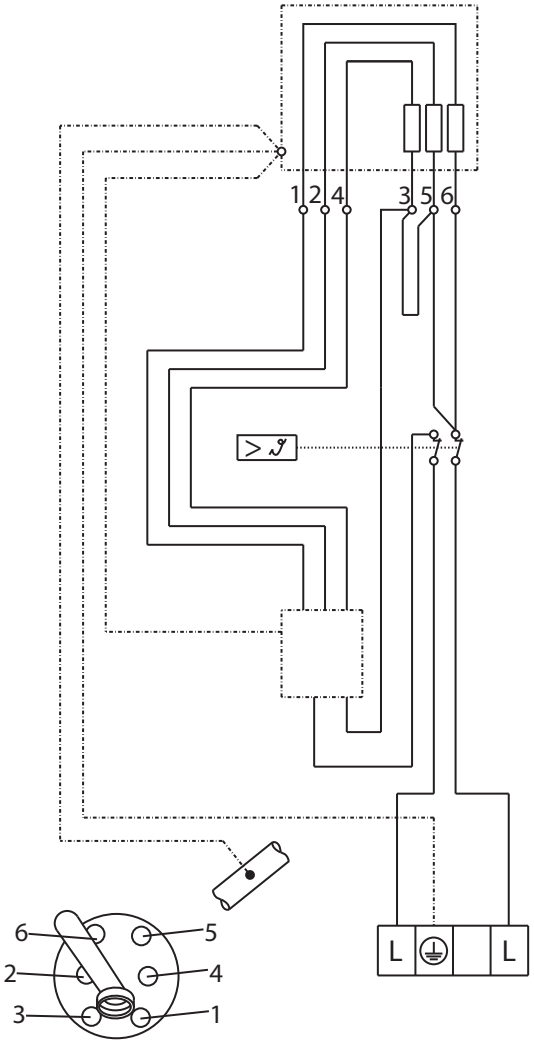
HydroShark 24



HydroShark 29



HydroShark 36



HydroShark 7, 10

Note:

1. **Boilers are considered a continuous load.**
2. **Copper conductors only.**

APPLICATIONS

Space Heating Applications

WARNING

- In order to purge air in water pipes within a closed loop system, an air vent, air separator, and expansion tank should be installed in the system. **(Stiebel Eltron pre-built space heating panels incorporate all of these features).**
- Water temperature over 125° F (52° C) can cause sever burns instantly of death from scalding.
- Chemicals such as diluted Glycol can be used for radiant floor, Hydro/fan coil air or Baseboard heating only. The diluted solution of glycol must contain between 25% and 55% of Glycol. Be aware that in a closed loop system, low pressure in the heat exchanger can cause low-temperature boiling, resulting in excessive noise and damage to the micro boiler. Consult with the glycol maker for specifications prior to use.

Stiebel Eltron Pre-Built Space Heating Panels

Stiebel Eltron pre-plumbed panels help make space heating easy and reliable. These panels are professionally engineered and use proven Primary/Secondary hydronic practices. Call Tech Support (1-800.805.5384) for assistance.

Sample:

HSPS120LT 1 Zone Panel:

For more information on Stiebel Eltron pre-plumbed panels and zoning options for this boiler please visit www.hydro-shark.com or call 800.805.5384.

Dual-purpose hot water heating

(Domestic and Space Heating)

Insert a Stiebel Eltron DHW integrator Panel to provide potable heated water and Hydronic Heating (with space heating panel(s)) with one heat source.

The Stiebel Eltron DHW Integrator Panel integrates with a wide variety of boilers and delivers “Priority” potable heated water with no storage tank and hydronic space heating in a small reliable package.

NOTICE Follow all local codes, or in the absence of local codes, follow the most recent edition of the National Standard Code, ANSI Z21.10.3.

For more information on Stiebel Eltron DHW Integrator panels and integrating space heating and domestic water for this boiler please visit www.hydro-shark.com or call 800.805.5384.

NOTICE Use Combi Panel with HydroShark 29 or HydroShark 36 Boilers Only. Size boiler for domestic and radiant applications accordingly.

Owner’s Guide

CONGRATULATIONS

Congratulations and thank you for choosing our micro boiler. Before use, we recommend that you read through this owner’s guide carefully. Keep this manual for future reference.

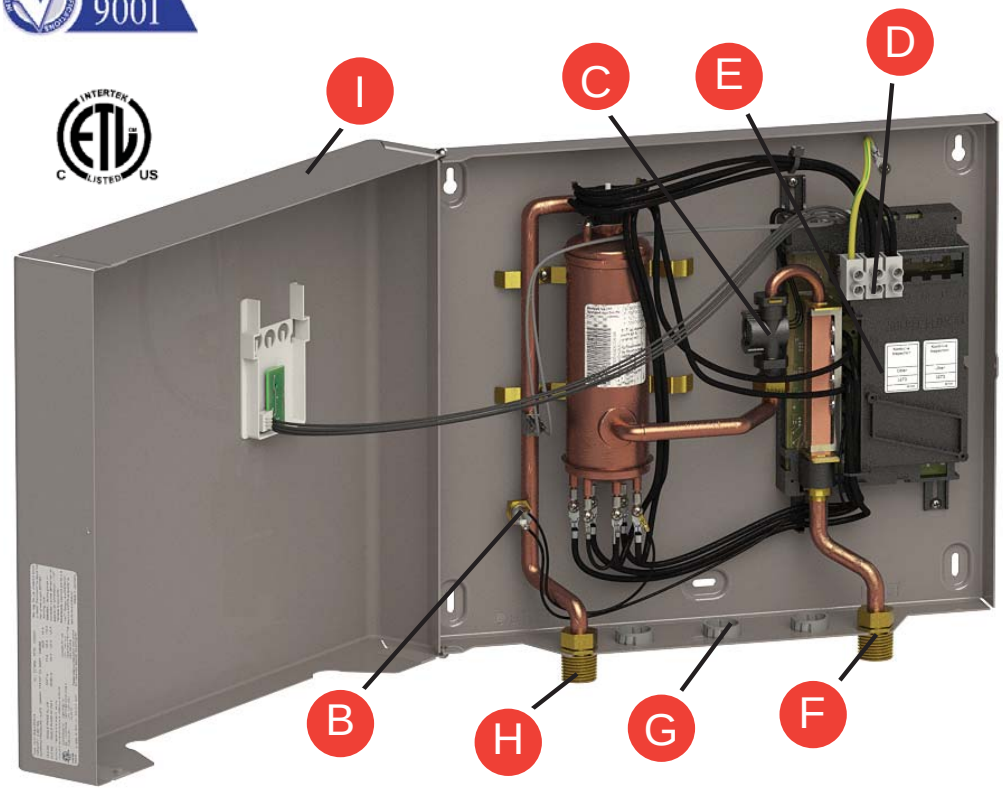
If you need an additional manual, contact the manufacturer or your local distributor. When you call, please tell us the product name and the serial number of your unit written on the rating plate of the boiler.

TROUBLESHOOTING

General

Symptom	Possible Cause	Solution
No Hot Water	•No Power •Safety Thermal Cut Off Tripped •Not Enough Flow Rate To Activate •Plugged Flow Sensor	•Utility Controlling Load •Reset Thermal Cut Off •Wrong Size Pump •Activate Thermostat/ Clean Flow Sensor
Water Not Hot Enough	•Water Flow Too High •Voltage To Low •Glycol/Water Ratio Too High •Manifold or Ball Valve Closed	•Reduce Water Flow Rate •Supply Correct Voltage to Unit •More than 20%, less than 50% •Open Loops/Ball Valves
LEDs Do Not Light	•Problem With Electronic Controls	Call Tech Support at 800.805.5384

COMPONENTS DIAGRAM



A- Fluid Temp.Controller
B- High Limit Safety
C- Flow Meter
D- Wiring Terminal
E- Control Board
F- Cold Fluid Return - 3/4” MPT
G- Electrical Circuit Knock-Outs
H- Hot Fluid Supply - 3/4” MPT
I- Hinged Cover on 12- 36 KW Units

PARTS LIST

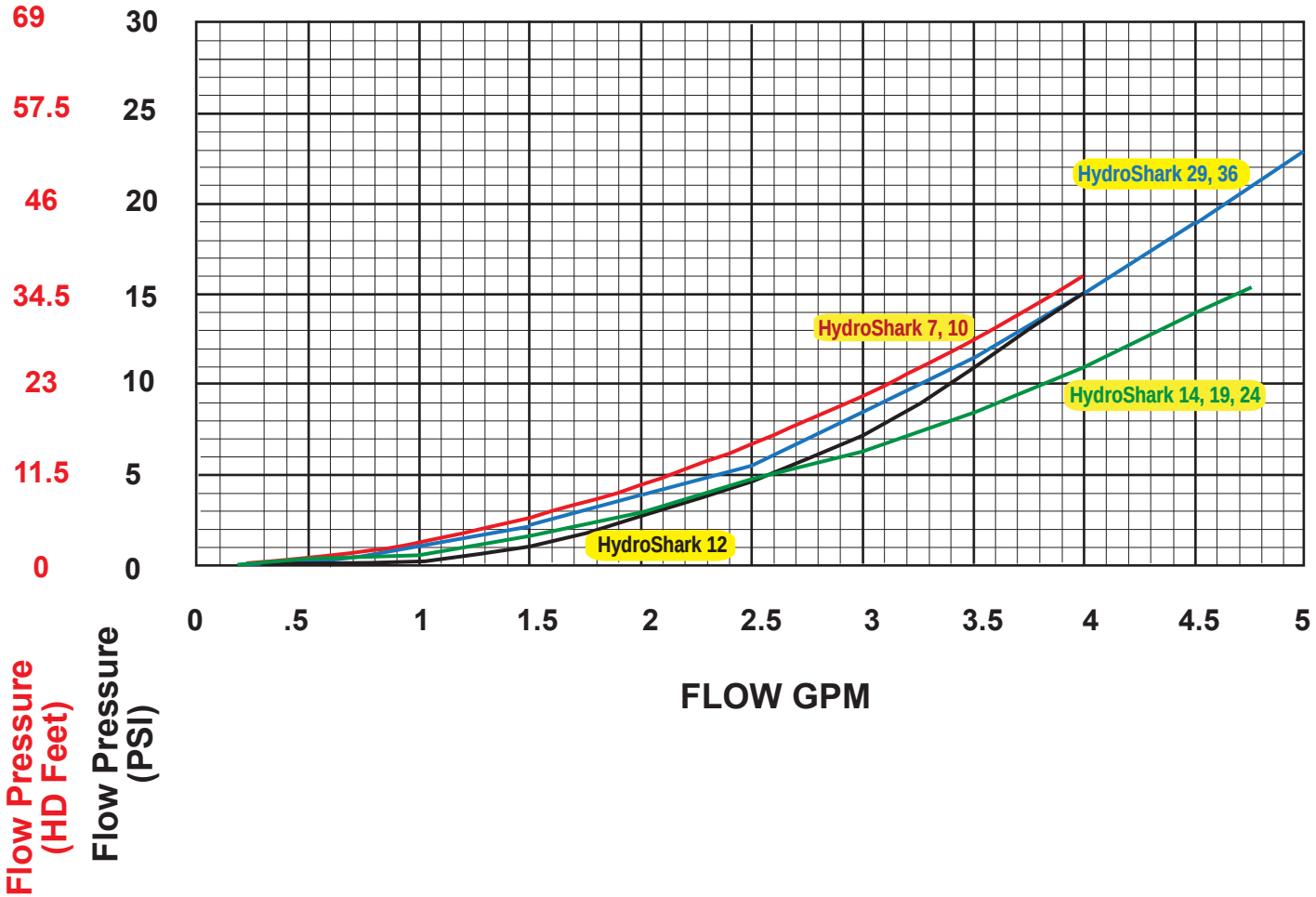
Part Number	Description
286356	Housing, HydroShark 12 to HydroShark 36
245307	Temperature Control Knob, HydroShark 12 to HydroShark 36
279998	Wiring Block, HydroShark 7 to HydroShark 12
279997	Wiring Block, HydroShark 14 to HydroShark 24
279996	Wiring Block, HydroShark 29 to HydroShark 36
286360	Heating System, HydroShark 12
286361	Heating System, HydroShark 14
286362	Heating System, HydroShark 19
286364	Heating System, HydroShark 24
286373	Heating System, HydroShark 29
286374	Heating System, HydroShark 36
286369	High Limit, HydroShark 7 to HydroShark 36
286366	Electronic Control Device Board, HydroShark 12
286844	Electronic Control Device Board, HydroShark 14 to HydroShark 19
286367	Electronic Control Device Board, HydroShark 24
296888	Electronic Control Device Board, HydroShark 29
296889	Electronic Control Device Board, HydroShark 36
286461	Flow Sensor, HydroShark 7 to HydroShark 36
278698	Plumbing Connection, S-R 3/4” NPT
286359	Electronic Temp Control, HydroShark 7 to HydroShark 36
280677	Outlet Temperature Sensor, HydroShark 7 to HydroShark 36
280730	Set Point Knob Board, HydroShark 12 to HydroShark 36
292575	Housing, HydroShark 7 to HydroShark 10
291851	Electronic Control Device Board, HydroShark 7 to HydroShark 10
283455	Code Plug, HydroShark 7 to HydroShark 10
292578	Back Panel, HydroShark 7 to HydroShark 10
291699	Return Fluid Connection, HydroShark 7 to HydroShark 10
278634	Supply Fluid Connection, HydroShark 7 to HydroShark 10
292577	Cover, HydroShark 7 to HydroShark 10
254312	Axis Connection Plug, HydroShark 7 to HydroShark 10

Boiler Pressure Drops Table

(Boilers HydroShark 7 to HydroShark 36)

This table is used for sizing Primary (Boiler) Circulator

All boilers must use Primary/Secondary circuitry. This is used to create Hydraulic seperation between the Boiler and Emitter circulators allowing you to create different flow rates for each circuit.



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STIEBEL ELTRON

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