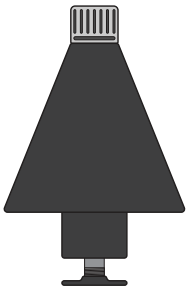
TIKI Torches

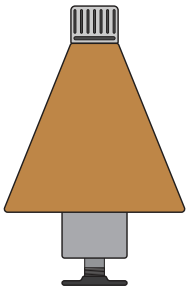
MANUAL & AUTOMATED TIKI TORCH > INSTRUCTIONS

Models Covered in this Instruction Set



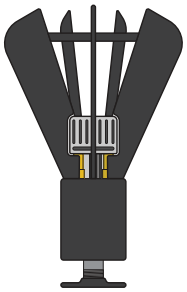
Black Cone

- BCATTNG
  25k BTU | 24VAC | NG
- BCATTLP
  25k BTU | 24VAC | LP
- BCTTNG
  25k BTU | MANUAL | NG
- BCTTLP
  25k BTU | MANUAL | LP



Copper Cone

- CCATTNG
  25k BTU | 24VAC | NG
- CCATTLP
  25k BTU | 24VAC | LP
- CCTTNG
  25k BTU | MANUAL | NG
- CCTTLP
  25k BTU | MANUAL | LP



Fin Style

- FSATTNG
  25k BTU | 24VAC | NG
- FSATTLP
  25k BTU | 24VAC | LP
- FSTTNG
  25k BTU | MANUAL | NG
- FSTTLP
  25k BTU | MANUAL | LP



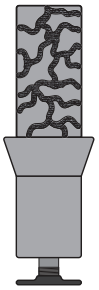
Bird of Paradise

- BOPATTNG
  25k BTU | 24VAC | NG
- BOPATTLP
  25k BTU | 24VAC | LP
- BOPTTNG
  25k BTU | MANUAL | NG
- BOPTTLP
  25k BTU | MANUAL | LP



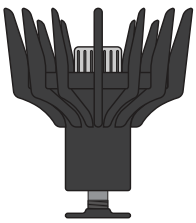
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- BATTLP
  25k BTU | 24VAC | LP
- BTTNG
  25k BTU | MANUAL | NG
- BTTLP
  25k BTU | MANUAL | LP



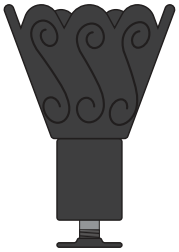
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- PATTLP
  25k BTU | 24VAC | LP
- PTTNG
  25k BTU | MANUAL | NG
- PTTLP
  25k BTU | MANUAL | LP



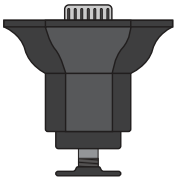
Malumai

- MATTNG
  25k BTU | 24VAC | NG
- MATTLP
  25k BTU | 24VAC | LP



Tulip

- TATTNG
  25k BTU | 24VAC | NG
- TATTLP
  25k BTU | 24VAC | LP



Gulf

- GATTNG
  25k BTU | 24VAC | NG
- GATTLP
  25k BTU | 24VAC | LP

Product Certifications

This QR Code will always take you to the most recent certifications for the entire Fire by Design product line.

You can also type in the URL directly: **http://fbdqr.com/product-certs**

WARNING: For Outdoor Use Only

STOP: If you cannot read or understand these instructions, do **NOT** attempt to install or operate this appliance.

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

STOP: **IF YOU SMELL GAS**

- Shut off gas to the appliance
- Extinguish any open flame
- If odor continues, keep away from the appliance and immediately call your gas supplier or fire department

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment

WARNING

For use with NATURAL or LP GAS Only

NO SOLID FUELS TO BE USED WITH THIS SYSTEM

WARNING

Do not store or use gasoline or other flammable vapors and liquids in vicinity of this or any other appliance.

An LP-cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

CARBON MONOXIDE HAZARD

This appliance can produce carbon monoxide which has no odor.

Using it in an enclosed space can kill you.

Never use this appliance in an enclosed space such as a camper, tent, car or home.

Installation must conform with local codes or, in the absence of local codes, with the

National Fuel Gas Code, ANSI Z223.1 / NFPA 54, or International Fuel Gas Code.

The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electric Code, ANSI/NFPA 70, if applicable.

AVERTISSEMENT

Ne pas entreposer ni utiliser de l'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de l'appareil, ni de tout autre appareil.

Une bouteille de propane qui n'est pas raccordée en vue de son utilisation, ne doit pas être entreposée dans le voisinage de cet appareil ou de tout autre appareil.

AVERTISSEMENT

Une installation, un ajustement, une modification, une réparation ou un entretien inapproprié peuvent être la cause de blessures ou de dommages. Veuillez lire attentivement les instructions d'installation, d'utilisation et d'entretien avant d'installer ou de réparer ce matériel.

AVERTISSEMENT

Ne pas utiliser cet appareil s'il a été plongé, même partiellement, dans l'eau. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de commande et toute commande qui a été plongée dans l'eau.

AVERTISSEMENT

Pour utilisation

à l'extérieur seulement.

AVERTISSEMENT

Pour utilisation avec naturel ou propane ne gaz seulement Aucun combustibles solides pour être utilisés avec ce système.

DANGER

S'il y a une odeur de gaz:

Coupez l'admission de gaz de l'appariel.

Éteindre toute flamme nue.

Si l'odeur persiste, éloignez-vous de l'appareil et appelez immédiatement

le fournisseur de gaz ou le service d'incendie.

MONOXYDE DE CARBONE

Cet appareil peut produire dumonoxyde de carbone, un gaz inodore.

L'utililisation de cet appareil dans des espases clos peut entrainer la mort.

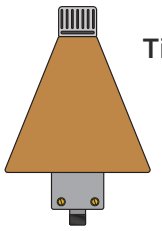
Ne jamais utilizer cet appareil dans un espace clos comme un vehicule de damping, une tente, une automobile ou une maison.

Table of Contents

4 What's in the Tiki Torch System?
4 Gas Requirements
4 Electrical Requirements
4 Clearance to Combustibles
5 Tiki Torch Installation
8 Daisy Chaining Tiki Torches
9 Completed Tiki Torch Installation Diagrams
10 Operation of the AWEIS Burner System
10 Maintenance of the AWEIS Burner System
11 Troubleshooting the AWEIS Burner System
11 Replacement Parts
12 Automated Pool Control Wiring
13 Return Policy & Warranty

What's in the Tiki Torch?

Below is a list of the contents that each Tiki Torch contains.



Tiki Torch Head

Tiki Pole - 80" (standard size)



Tiki Base Pole - 12"



Custom Tiki Poles

If you are looking for a custom size Tiki Pole (shorter or longer than the standard 80") please reach out to Fire by Design for custom Tiki Pole Lengths.

Gas Requirements

Fuel Type: Before making gas connections ensure appliance being installed is compatible with the available gas type. *Check the label on the appliance to confirm appliance gas type requirement.*

Gas Pressure: Proper input gas pressures are required for optimum appliance performance.

Pressure	Natural Gas	Propane
Minimum	3.5" W.C. - $^1/_8$ psi	8.0" W.C. - $^1/_3$ psi
Nominal	7.0" W.C. - $^1/_4$ psi	11.0" W.C. - $^1/_3$ psi
Maximum	14.0" W.C. - $^1/_2$ psi	14.0" W.C. - $^1/_2$ psi

Electrical Requirements

The Tiki Torches operates on 24 Volts AC power **ONLY.** Do not attempt to power using 110 Volts AC Power. **DAMAGE WILL RESULT!**

Recommended Wire Size:
12-gauge wire for all hardwired installations.

Custom Transformers:
The standard Transformer is 100VA, which powers 3 Tiki Torch Heads. 75VA powers 2 Tiki Torch Heads. If you want a custom transformer, we can produce a transformer anywhere from 150VA to 1200VA. Contact us for more info.

Acceptable Input Voltages to Supplied 24 Volt AC Transformer
110 / 210 / 220 / 240 / 480 Volt AC

Supplied 24 Volt AC Transformer compatible with all voltages listed above)

(Read label on supplied transformer for proper connection information)

Clearance to Combustibles

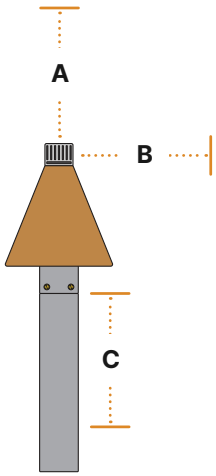
FIRE RISK

Please provide adequate clearance to combustible materials as shown:

A - Top of Tiki Torch Head to Combustible Ceiling
8' (feet)

B - Side of Burner Cage to Combustible Side Wall
2' (feet)

C - Bottom of Tiki Torch Head to Combustible Floor
2" (inches)



Installation of the Tiki Torch

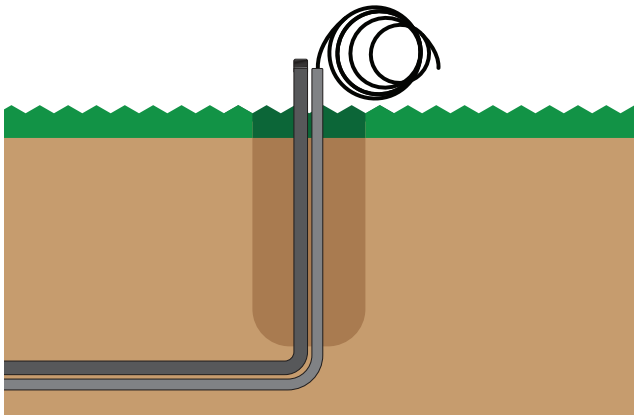
This guide will walk you through the process of installing your Tiki Torch, including rough-in preparation, base pole installation, gas and electrical connections, and securing the torch head.

Step 1: Prepare Gas and Electrical Connections

Dig a hole 12 inches deep using a post hole digger.

Stub up a 1/2” gas line and an electrical conduit inside the hole.

Use 12-gauge low-voltage wire for electrical connections. Pull at least **8 feet of extra wire** beyond the conduit end to ensure enough slack for final connections.

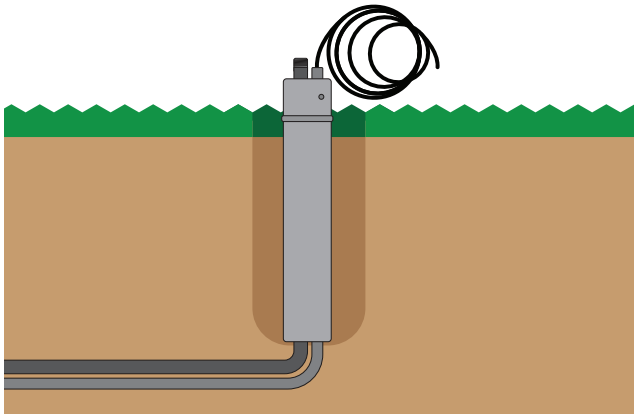


Step 2: Install the Base Pole

Feed the electrical wire through the Base Pole before placing it in position.

Slide the Base Pole over the gas and electrical stubs in the hole.

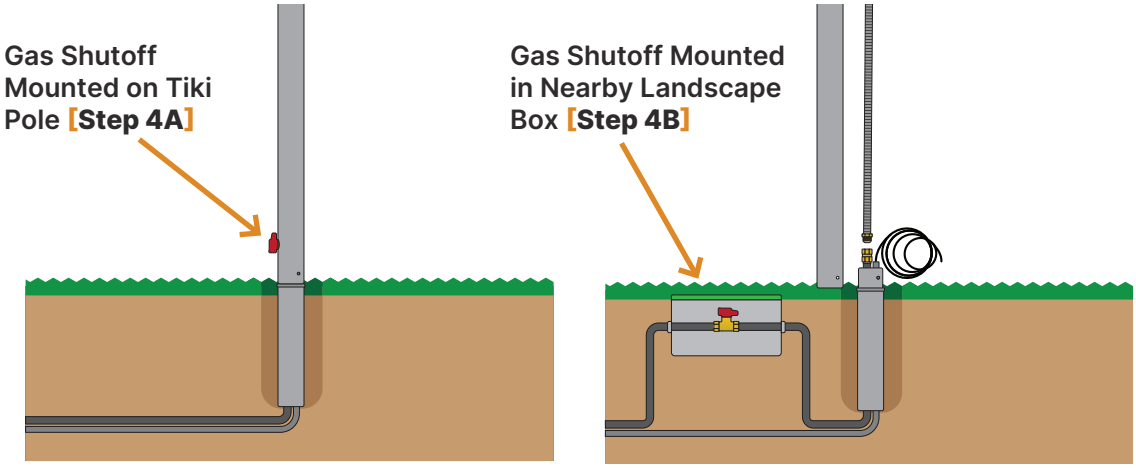
Adjust the height so the tapered top end of the Base Pole is slightly above grade for easier assembly.



Step 3: Choosing Where to Install the Gas Shut-Off Valve

You can either install the manual gas shut-off on the tiki pole itself or in a nearby location like a landscaping box. Depending on what you choose, skip to that step indicated below:

NOTE: Fire by Design does not include a Gas Shut-Off Valve. This will be provided by the installer in order to fit with your current gas line set up.



OR

Step 4A: Installing the Manual Gas Shutoff Valve **On the Tiki Pole** & Installing the Tiki Pole

You will need to find 2 separate measurements:

Measurement A: The distance from the bottom of tiki pole to where your shutoff valve will need to be installed on the gas riser. This is where you will drill a 1" hole into the tiki pole so you can attach the shutoff flange to the outside of the tiki pole.

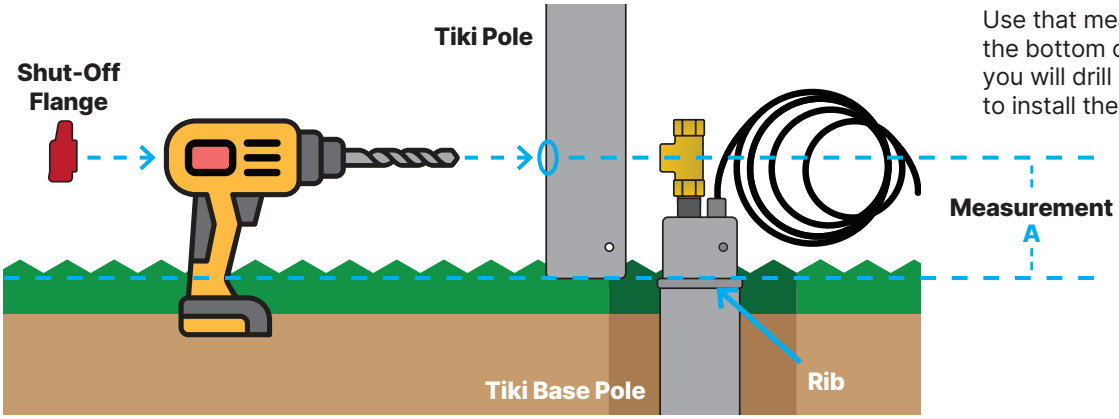
Measurement B: The distance from the Shut-Off valve to the top of the Tiki Pole (for installing the Tiki Torch Head). This can be achieved by using a Rigid Gas Line or a Flex Line (measurements will differ depending on which you use). This dimension is especially important for a Rigid Gas Line.

Fire by Design advises you to use a non-whistling flex line or another type of flexible gas line, as it will make installation much simpler.

Finding Measurement A

Install the Shut-Off Valve on to your 1/2" Gas Riser (recommended to use pipe dope or Gas Teflon tape), then remove the Shut-Off Flange from the Valve.

Measure from the **Rib** on the **Tiki Base Pole** to the center point of where the shutoff flange would be installed. This will give you **Dimension A**.



Use that measurement to measure from the bottom of the Tiki Pole. That is where you will drill your **1" hole** on the **Tiki Pole** to install the Shut-Off Flange.

Finding Measurement B

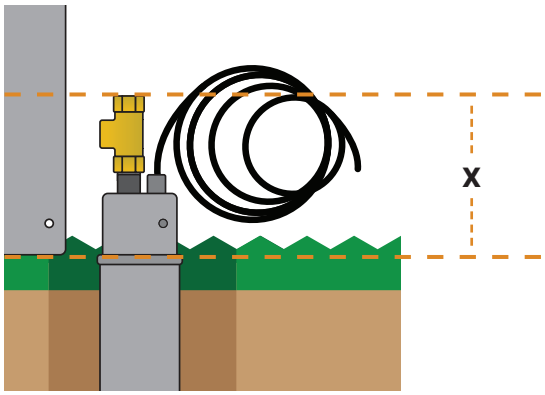
If you are using a flex line, this measurement is less important as you can hide some slack in the Tiki Pole. Regardless, you should still be close to the measurement.

1: Measure from the **Rib** of the **Tiki Base Pole** to the top of your **Coupling**.

2: The **Tiki Pole** is **80"** in length (excluding Tiki Base Pole) . Take the Tiki Pole Length and minus the " **X** " value from Step 1.

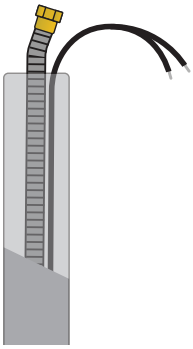
3: That the result from Step 2 and minus that by one more inch. **This is how long your gas line should be.**

Formula: **80" - X" - 1" = Measurement B**

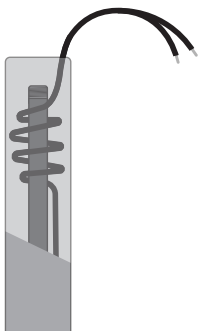


Once you have Measurement **B**, you can now run your gas line and your electrical wires through the Tiki Pole and slide the Tiki Pole over the Tiki Base Pole. **Make sure to line the hole you drilled up with the Gas Shut-Off Valve from the previous step. You can now install the Flange on to the Gas Shut-Off.** See the examples below of the Top of Tiki Pole Gas & Electrical Line finished installs.

Using A Flex Gas Line



Using A Rigid Gas Line



NOTE: When using a Rigid Gas Line, wrap the electrical line around the top of the gas line COUNTER-CLOCKWISE 5 - 7 times. This will ensure your electrical lines are not stressed when screwing on the Tiki Torch Head.

Step 4B: Installing the Manual Gas Shutoff Valve **Nearby** & Installing the Tiki Pole

You will need to find 1 measurement:

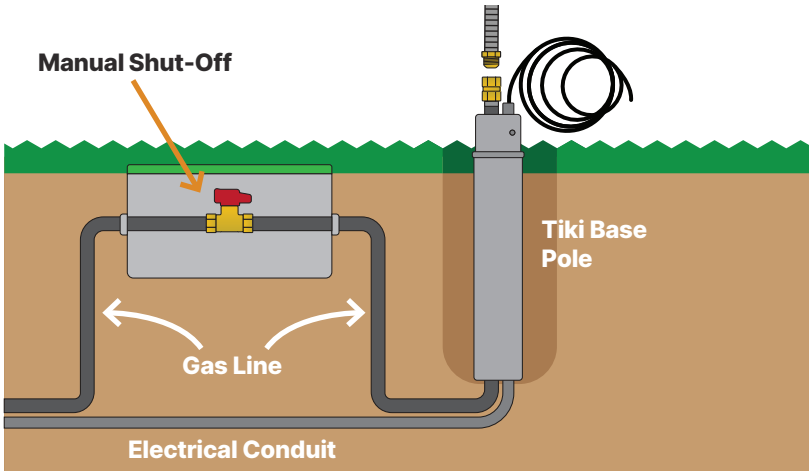
Measurement A: The distance from the Shut-Off valve to the top of the Tiki Pole (for installing the Tiki Torch Head). This can be achieved by using a Rigid Gas Line or a Flex Line (measurements will differ depending on which you use). This dimension is especially important for a Rigid Gas Line.

But before we do that, we need to install the manual gas shut-off valve nearby, like in a landscape box.

Fire by Design advises you to use a non-whistling flex line or another type of flexible gas line, as it will make installation much simpler.

Installing the Gas Shut-Off in a Nearby Location

Below you will find an example of installing a manual shut-off in a nearby location - for this example we will use a Landscape box that has been installed somewhere near the Tiki Pole.



Finding Measurement B

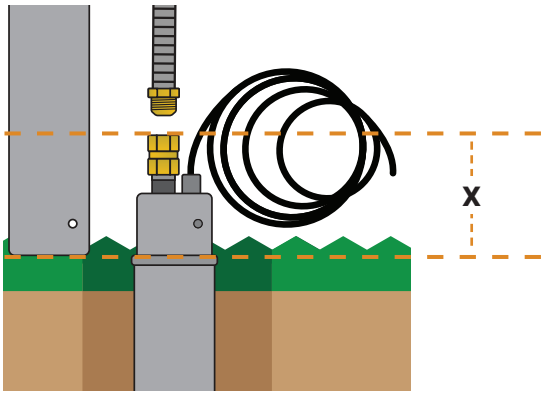
If you are using a flex line, this measurement is less important as you can hide some slack in the Tiki Pole. Regardless, you should still be close to the measurement.

1: Measure from the **Rib** of the **Tiki Base Pole** to the top of your **Coupling**.

2: The **Tiki Pole** is **80"** in length (excluding Tiki Base Pole) . Take the Tiki Pole Length and minus the " **X** " value from Step 1.

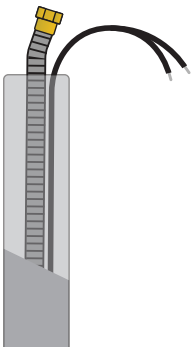
3: That the result from Step 2 and minus that by one more inch. **This is how long your gas line should be.**

Formula: **80" - X" - 1" = Measurement B**

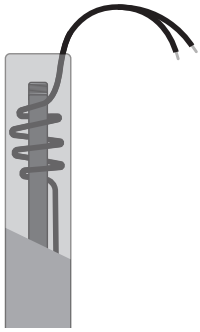


Once you have Measurement **B**, you can now run your gas line and your electrical wires through the Tiki Pole and slide the Tiki Pole over the Tiki Base Pole. See the examples below of the Top of Tiki Pole Gas & Electrical Line finished installs.

Using A Flex Gas Line



Using A Rigid Gas Line

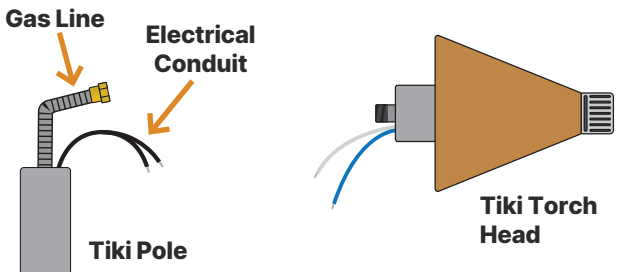


NOTE: When using a Rigid Gas Line, wrap the electrical line around the top of the gas line COUNTER-CLOCKWISE 3 - 5 times. This will ensure your electrical lines are not stressed when screwing on the Tiki Torch Head.

Step 5: Installing the Tiki Torch Head

Unless you have ordered a custom configuration for your Tiki Torch, the diagram on the right is what your Tiki Torch Head will look like. For this example, we will be showing a flex gas line to attach to the Tiki Torch Head.

REMEMBER: If using a Rigid Gas Line, wrap the electrical line around the top of the gas line COUNTER-CLOCKWISE 3 - 5 times. This will ensure your electrical lines are not stressed when screwing on the Tiki Torch Head.

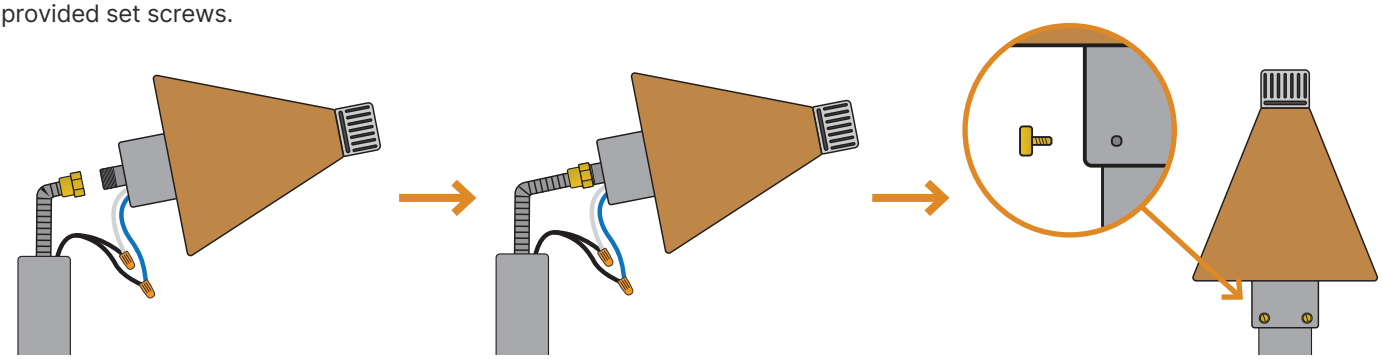


Attach the wires from the Tiki Torch Head to the 2 wires coming up inside the center of the pole with wire nuts. Once that is done you are ready to connect the gas line. Please refer to the situation that fits your installation type below.

For Flex Gas Lines: You can now thread the gas line on to the Tiki Torch Head. Then slide the Tiki Torch Head on to the Tiki Pole.

For Rigid Gas Lines: Line up the gas line you installed earlier with the Tiki Torch Head, then slide the Tiki Torch Head on to the Tiki Pole and screw in a clockwise rotation until tight.

Once in place, you can tighten the Tiki Torch Head to the Tiki Pole with 3 provided set screws.



Attaching Electrical Connections | **Attaching Gas Connection** | **Installing Set Screws (3)**

Daisy Chain Wiring of Multiple Tiki Torches

The Fire by Design 24 Volt AC Tiki Torch has a **White** and a **White/Blue** wire protruding from it:

White Wire

White/Blue Wire

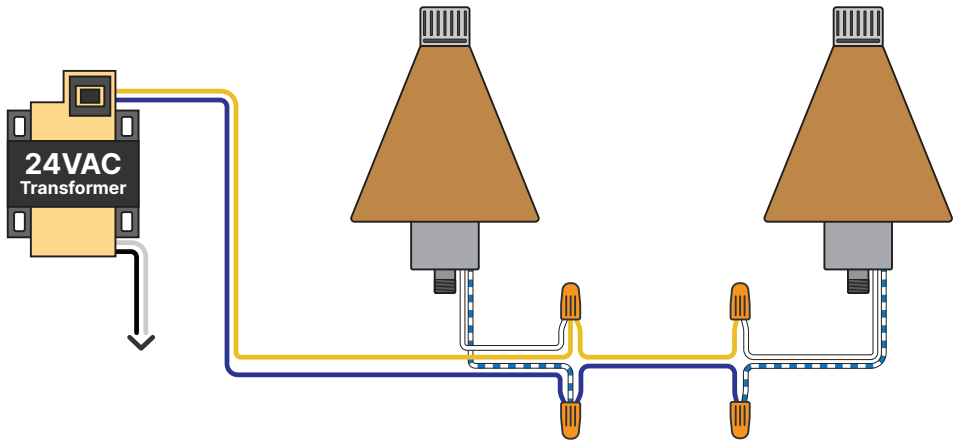
When chaining multiple Tiki Torches, the polarity between each Tiki Torch **MUST** be the same.

All the **White** wires must be connected to the same color wire (**Yellow**) from the 24VAC Transformer.

PLUS

All the **White/Blue** wires must be connected to the same color wire (**Blue**) from the 24VAC Transformer.

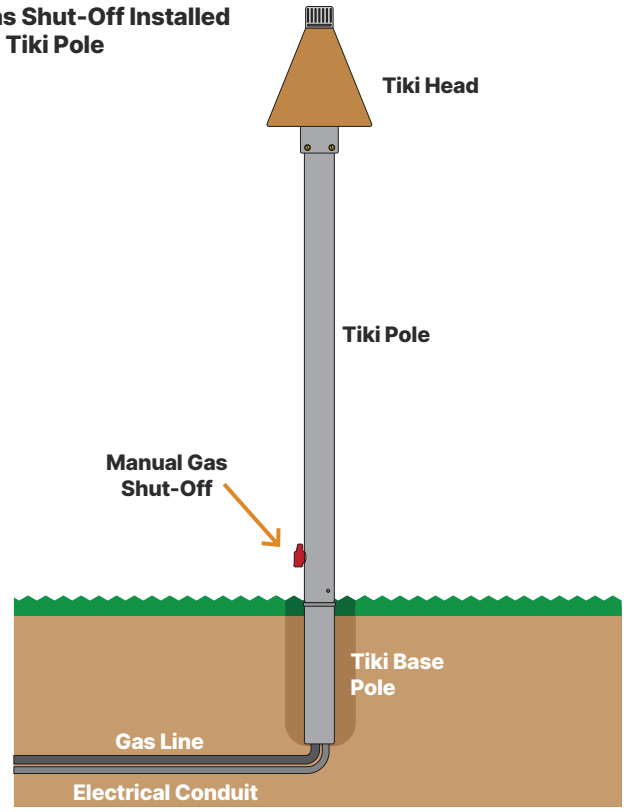
See the illustration provided for daisy chaining 2 Tiki Torches together.



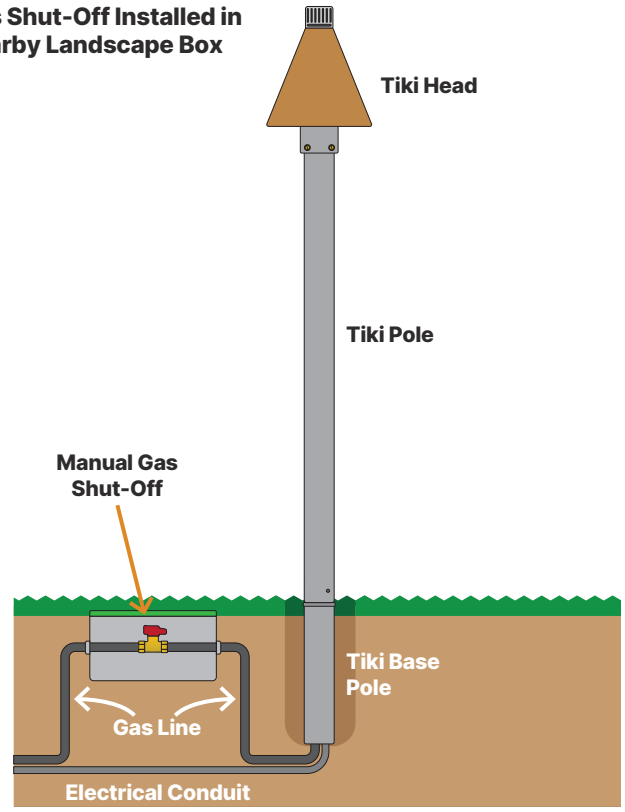
Completed Tiki Torch Installation Diagrams

The below diagrams are representations of a final & complete installation of the Tiki Torch. The first two diagrams are showing the different installations of the Manual Gas Shut-Off Valve. The third diagram shows how you can cross two Tiki Torches.

Gas Shut-Off Installed on Tiki Pole

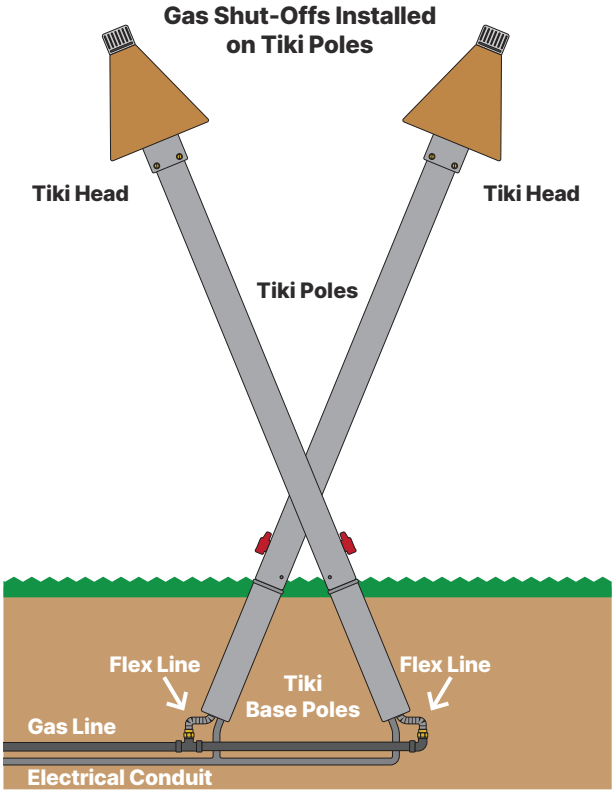


Gas Shut-Off Installed in Nearby Landscape Box

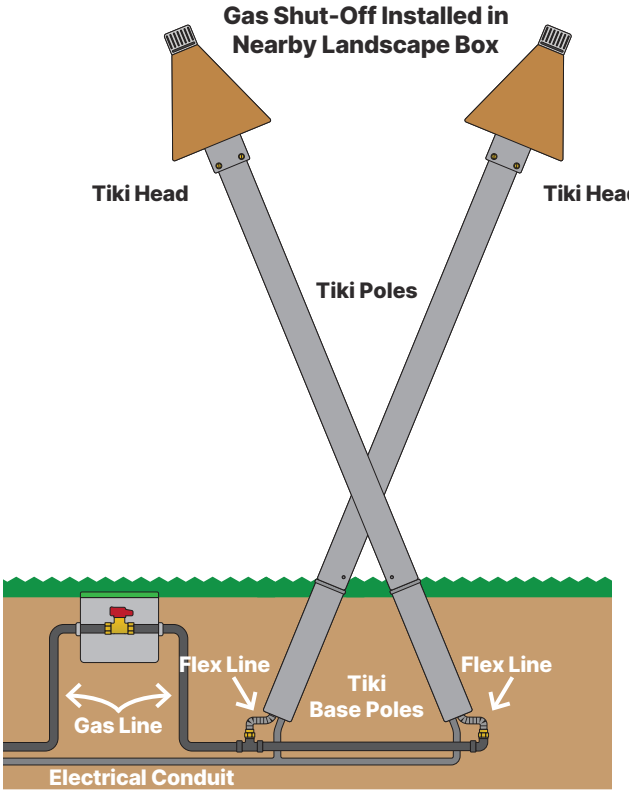


Completed Dual Tiki Torches in a Crossed Pattern

Gas Shut-Offs Installed on Tiki Poles



Gas Shut-Off Installed in Nearby Landscape Box



Operation of the Tiki Torch

Do **NOT** use this appliance if any part has been under water.

Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

HOT! - DO NOT TOUCH - SEVERE BURNS MAY RESULT - CLOTHING IGNITION MAY RESULT!

Carefully supervise children in same area as appliance. Alert children and adults to hazards of high temperatures. Clothing or other flammable materials should not be hung or placed near the appliance

WARNING! **This appliance should be inspected before use and at least annually by a Qualified Service Technician that is Locally Licensed.**

Any guard or protective device removed for servicing must be replaced prior to operation. Keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Fire Feature Start Up

Prior to turning appliance on visually inspect fire feature to ensure debris such as leaves or other combustible material has not collected inside the feature which could burn and emit embers once the fire feature is turned on. Also ensure any person standing close to the fire feature is aware you will be turning the fire feature on prior to actually turning it on.

Turn fire feature on by turning on the electrical device used to power the fire feature.

Below is the Sequence of Operation during Ignition:

- Power is applied.
- Hot surface igniter (glow plug) becomes hot, and 4 seconds later the Pilot Gas Valve opens.
- Within 10 seconds of power application, the Pilot Flame should be visible (at night only).

WARNING!

If fire feature fails to turn off completely (small flames still visible) - Turn off gas supply using the manual gas shut-off.

Fire Feature Shutdown

Turn fire feature off by turning off the electrical device used to power the fire feature.

Maintenance of the Tiki Torch

WARNING! **Maintenance should be done by a Qualified Service Technician. The appliance should be inspected before use and at least annually.**

Ensure gas & power are shut off and the appliance is cool before servicing. Any guard or protective device removed for servicing must be replaced prior to operation.

Prior to Each Use:

- Inspect for debris in the Fire Feature. Remove any debris prior to use.

Semi-Annually:

- Visually inspect Pilot Burner for debris / insect infestation (spider webs).
- Visually inspect burner holes for debris / insect infestation.
- Clean either of the above if necessary using compressed air.

Annually:

- Visually inspect Pilot Burner for excess corrosion due to heat and moisture.
- Turn fire feature on to ensure proper operation.

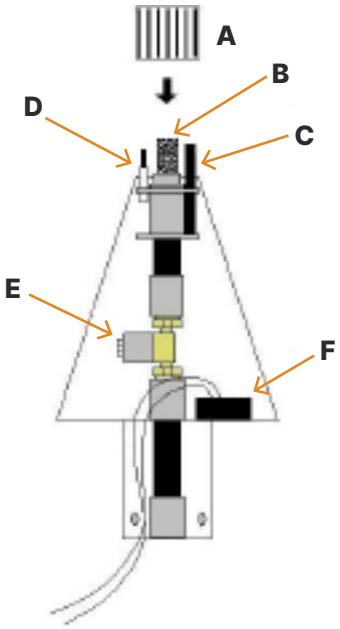
Troubleshooting the Tiki Torch

This QR Code will always take you to the most recent troubleshooting guide for the Tiki Torches.

You can also type in the URL directly: **http://fbdqr.com/tiki-troubleshoot**

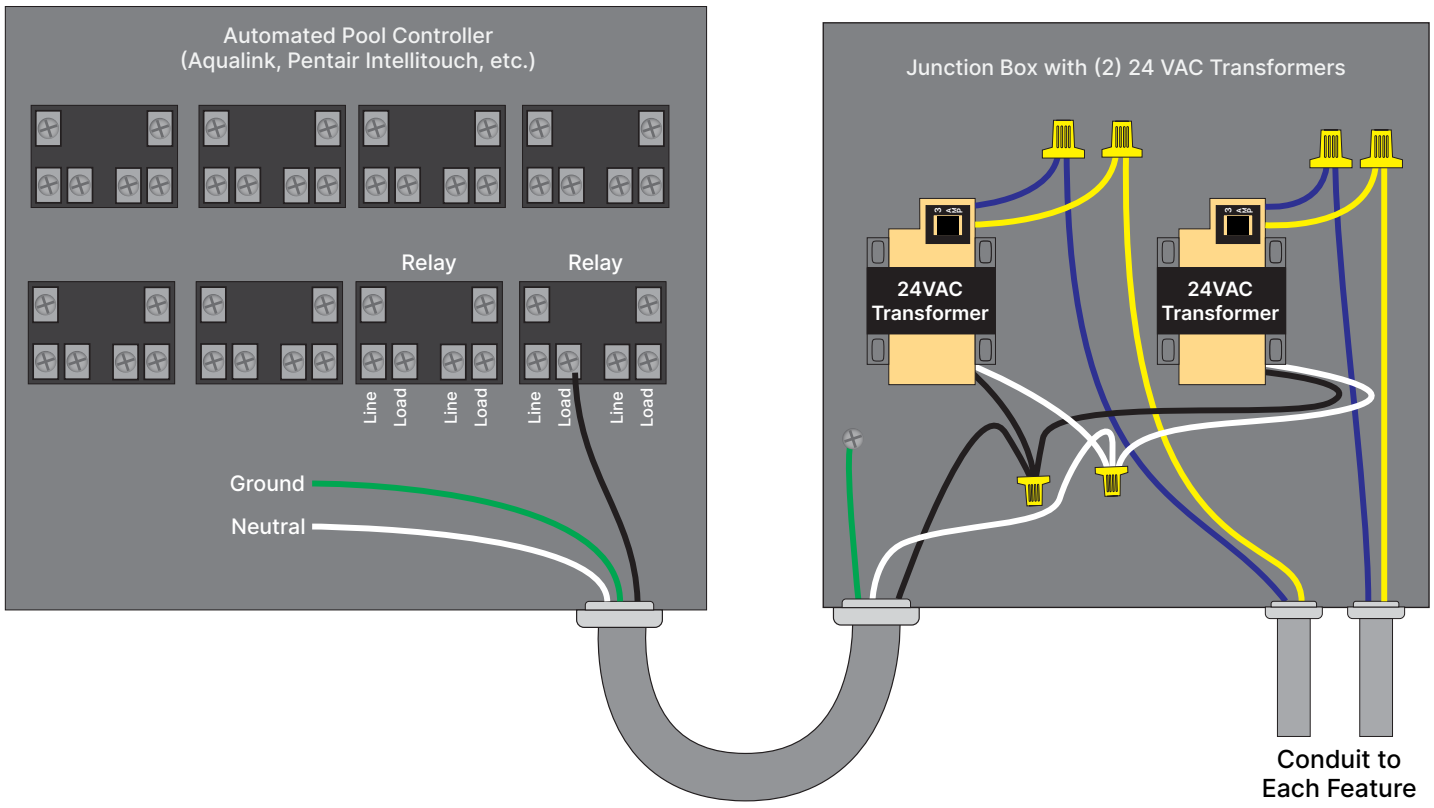
Replacement Parts for the Tiki Torch

Identifier	Part #	Description
A	WC	Wind Cap
B	TB	Burner
C	TTS	Thermal Sensor
D	HSI	Hot Surface Igniter
E	TGV	Gas Valve
F	FBDC	FBD Controller

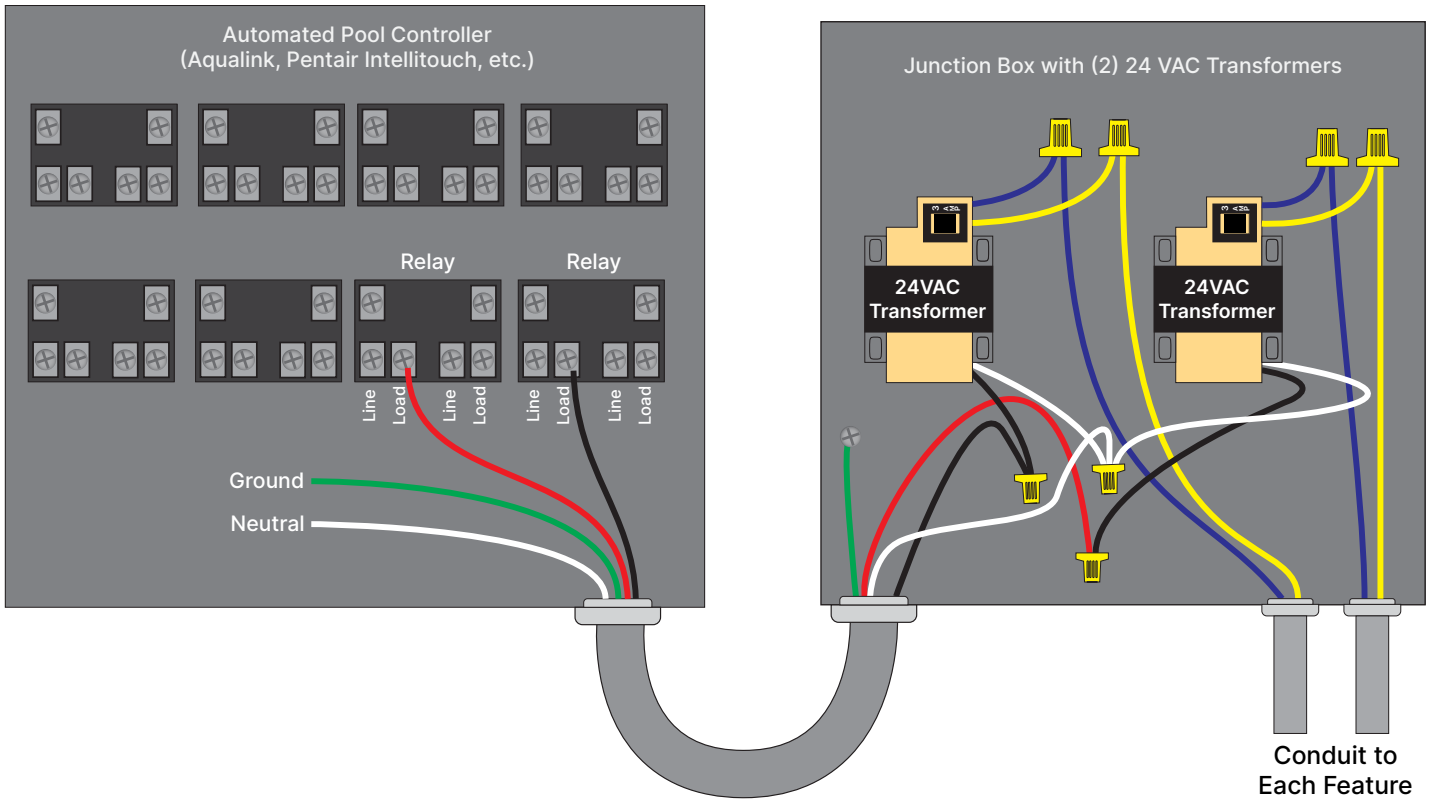


Automated Pool Controller Wiring

Wiring to Pool Controller when 2 Features **Turn ON at the same time | 24 Volt AC Systems**



Wiring to Pool Controller when 2 Features **Turn ON Separately | 24 Volt AC Systems**



Return Policy

All orders from Fire by Design (FBD) may be returned within 30 days for a full refund. In order to return or exchange (under the warranty guidelines described in the Fire by Design Limited Warranty section of this instruction set) all or part of your order, you must contact us for a Return Merchandise Authorization number (RMA#). Call toll free (877) 807-8923 to obtain an RMA# from a FBD representative.

All returned merchandise must be in the original packaging including manuals, accessories, cables, etc. with the authorization (RMA#) clearly printed on the outside of the package. Return requests must be made within 30 days of the receipt date. Any shipping and/or handling charges on the original order cannot be refunded. At our discretion, we may levee a restocking fee of 15% of the cost of items returned.

FBD is not responsible for shipping costs or damage on returned items. Units to be returned should be packed carefully. Please be advised that packages sent by normal US Postal Service cannot be tracked to ensure delivery.

Since FBD cannot provide credit for a return without confirming its receipt, we recommend that you use a delivery service that can be tracked and or insured.

Fire by Design | Limited Warranty

Fire by Design warrants its products to be free from defective material and workmanship for the period of time indicated below for each product line. The warranty time periods listed below are from the original date of purchase. Fire by Design agrees to repair or replace, at its sole discretion, a defective product if returned to Fire by Design within the warranty period and accompanied by proof of purchase. This warranty does not extend to any Fire by Design products which have been subject to misuse, neglect, accident, incorrect wiring or to use in violation of operating instructions furnished by us, nor extend to any units altered or repaired for warranty defect by anyone other than Fire by Design or at Fire by Design's direction. This warranty does not cover any incidental or consequential damages and is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our products. Some states do not allow limitations on how long an implied warranty lasts, and/or the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to the original CUSTOMER. This warranty gives you specific rights and you may also have other rights, which vary, from state to state. If you have any questions concerning this warranty call (877) 807-8923.

Bowls

All Decorative GFRC, Stainless, Copper or Aluminum Bowls are warranted for (2) years from delivery date against any manufacturing defect or structural failure. Small stress cracks and surface crazing are a natural occurrence in concrete and not covered by warranty.

Fire Rings

All 304 Stainless Steel Rings, 316 Stainless Steel Burners (Marine Grade) and High Output Burners have a Lifetime Warranty.

Burner Pans

All 304 Stainless Steel Burner Pans warranted for (5) years. All Aluminum Burner Pans have a Lifetime Warranty.

Electronic Ignition Systems (Field Serviceable AWEIS SC, HC, XHC, SUBEIS, BP AWEIS)

All Field Serviceable AWEIS and SUBEIS systems are warranted for (1) year from date of purchase for Commercial Applications and (3) years from date of purchase for Residential Applications provided the product has not been modified, abused, misused or improperly installed, maintained or repaired during such period. Fire by Design, at its discretion, will either repair or replace the defective product. If one of the Field Serviceable parts of an AWEIS or SUBEIS fails a replacement part will be provided at no charge to the customer. Labor cost to replace the failed field serviceable is not covered under this warranty. If a part other than a Field Serviceable part fails that part will be replaced or repaired at no charge to the customer.

Vulcan Fire Module & Tiki Torches

Vulcan Fire Modules and Automated Tiki Torches are warranted for (1) year from the date of purchase.

The original purchasing information such as an invoice or product serial number is required on all warranty returns.