



Helix Torch

Manual Operation

Installation Guide

Natural Gas - Propane

Tested & Listed By

OMNI-Test Laboratories, Inc.

Portland Oregon USA

ANSI Z21.97-2012/CSA 2.41-2012, CGA 2.17-M91 (R2009)
Outdoor Decorative Gas Appliances - Report # 028-F-83b-5

WARNING: For Outdoor Use Only

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the 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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier

 DANGER	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.
	

DANGER

If you smell gas:

1. Shut off gas to the appliance.
2. Extinguish any open flame.
3. 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 this manual thoroughly before installing or servicing this equipment. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

Installer: After installation give this manual to the homeowner and explain operation of this appliance.

Overview

This manual details the installation, operation, and routine maintenance for the Helix torch.

Listing Details

This torch was tested to ANSI Z21.97-2012/CSA 2.41-2012, CGA 2.17-M91 (R2009) "Outdoor Decorative Gas Appliances".

Report Number: 028-G-83b-5	Tested & Listed By	Portland Oregon USA	Serial Number	
Min. Clearances to Combustible Materials*	Gas Rating		NG	LP
26" from top of glass	Input Rating (BTU/h)		20,000	20,000
8" from side of glass	Orifice Size		#50	#55
2.5" from bottom of glass	Burner Port Holes		25 Holes	49 Holes
*See manual for further details	Manifold Pressure		7" wc	11" wc
	Max. Inlet Pressure		7" wc	11" wc

Tested to: Applicable portions of ANSI Z21.97-2012 / CSA 2.41-2012, CGA 2.17-M91 (R2009) "Outdoor Decorative Gas Fireplace", and AGA 8-96-1997, "Requirement for Gas-Fired Decorative Illuminating Appliances for Outdoor Installation". Suitable for use in elevations of 0-4500 ft (0-1370 m). Electrical Rating: 115 V, 60 Hz, 0.5 Amps

For outdoor installation only. If stored indoors, detach and leave cylinder outdoors (if applicable). The gas supply must be turned off at the LP-gas supply cylinder when this appliance is not in use (if applicable).

CAUTION: When using an LP cylinder, the gas pressure regulator provided with the post and base kit must be used. The regulator is set for an outlet pressure of 11" wc for LP.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

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- ! **This appliance must be installed in accordance with all local codes, if any; if not, follow ANSI Z223.1.**
- ! **This appliance must only be used outdoors in a well-ventilated area. It may not be used in a building, garage, or other enclosed space.**
 - This appliance is not for use with solid fuel.
 - The torch must be kept clean and free of leaves and debris to insure safe operation.
 - Any hose or gas-supply line that is damaged or shows evidence of excessive abrasion or wear must be replaced prior to use of the torch.
 - If using a gas supply line to the torch, make sure it is properly located away from any walkway or in an area where it may be subject to accidental damage
 - Educate all children and adults of the dangers of the torch. Young children should be supervised when they are in the same area as the torch. Do not let children play with the torch.
 - Do not place clothing or other flammable items on or near the torch.
 - Any screen or guard removed for servicing must be replaced prior to operating the torch.
 - This unit must be installed and repaired by a qualified installer to prevent the possibility of an explosion. Your dealer will know the requirements in your area and can inform you of those people considered qualified. The torch should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive debris from leaves, dirt, insects, etc.
 - 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 that has been under water.
 - The instructions in this manual must be strictly adhered to. Do not use makeshift methods or compromise in the installation. Improper installation will void the warranty and safety listing.
 - This appliance is approved for either natural gas (NG) or propane (LP). Burning the incorrect fuel will void the warranty and safety listing and may cause an extreme safety hazard. Direct questions about the type of fuel used to your dealer. A label is placed on the control panel to show which fuel the torch is designed for (in addition, NG units have 25 burner holes, LP units have 49 burner holes).
 - Contact your local building officials to obtain a permit and information on any installation restrictions or inspection requirements in your area.
 - If the flame becomes sooty, dark orange in color, or extremely tall, do not operate the torch. Call your dealer and arrange for proper servicing.
 - Do not operate the torch if it is not operating properly in any fashion or if you are uncertain. Call your dealer for a full explanation of your torch and what to expect.
 - Do not store or use gasoline or other flammable liquids in the vicinity of this torch.
 - Never remove, replace, modify or substitute any part of the torch unless instructions are given in this manual for routine maintenance and cleaning. A trained technician must do all other work. Do not modify or replace orifices.
 - Allow the torch to cool before carrying out any maintenance or cleaning.
 - Operate the torch according to the instructions included in this manual.
 - If the burner does not start correctly turn the gas off at the gas control valve and call your dealer for service.
 - Do not use this appliance to cook food.
 - Instruct everyone in the house how to shut gas off to the torch and at the gas main shutoff valve. The gas main shutoff valve is usually next to the gas meter or propane tank and requires a wrench to shut off.
 - Do not operate the torch during a lightning storm or a possible lightning storm.
 - Do not operate the torch during high wind conditions.
 - Do not install in or on recreational vehicles and/or boats.
 - Do not throw this manual away. This manual has important operating and maintenance instructions that you will need at a later time. Always follow the instructions in this manual.
 - **Grand Effects, Inc. grants no warranty, implied or stated, for the installation or maintenance of your torch, and assumes no responsibility of any consequential damage(s).**

Features:

- Maximum 20,000 BTU Input
- Removable Rain Cap
- Tempered Glass (easy to remove and clean)
- Stainless Steel Construction
- Automatic Gas Shutoff Valve for Safety
- Rotary Piezo Igniter for Easy Lighting
- Wet Weather Lighting Port for Positive Ignition

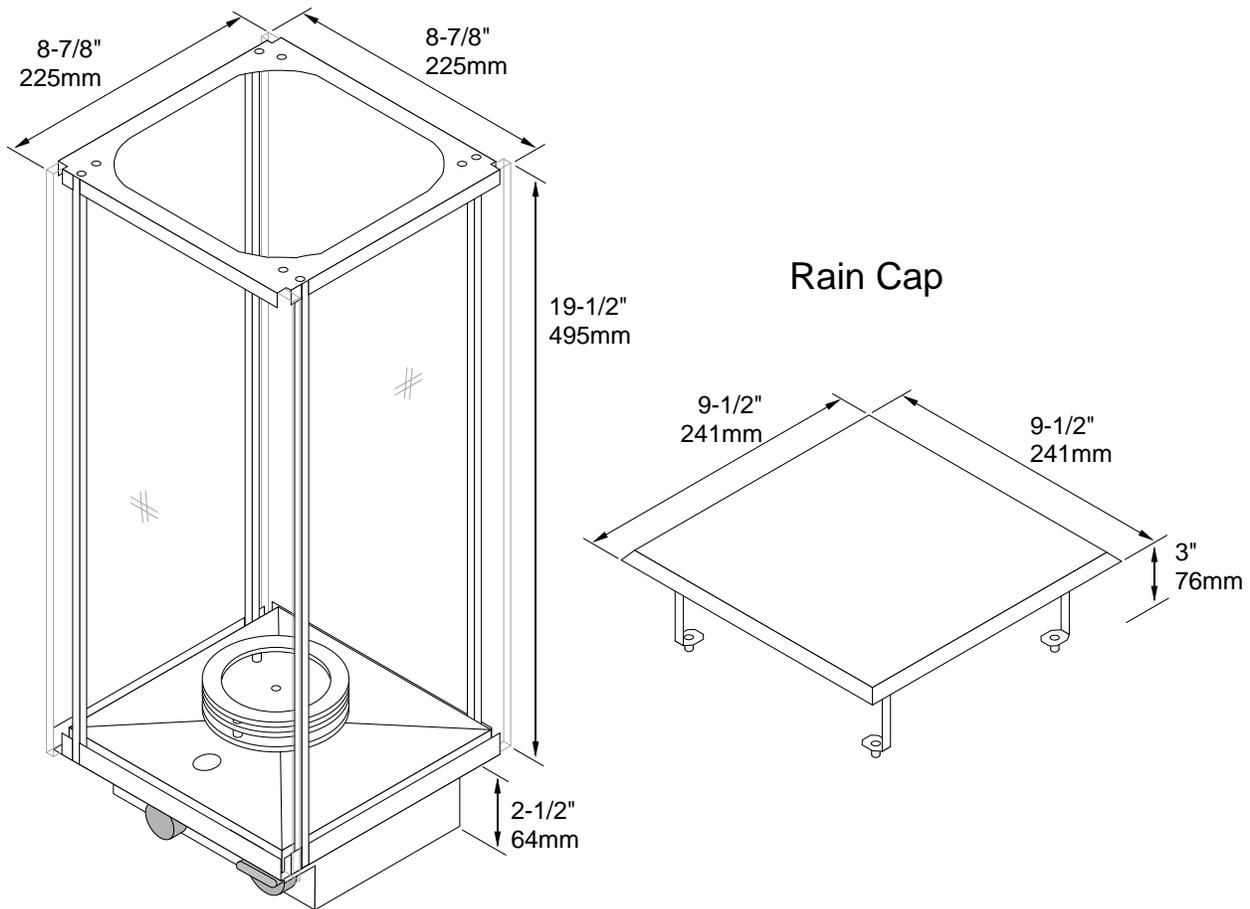
Installation Options:

- For Outdoor Installation Only
- For Fixed Line Installations Only
- Wall Mount
- Deck Mount
- Column Mount

Specifications:

	NG	LP
Input Rating (Btuh) High - Low	20,000 – 14,000	20,000 – 17,500
Orifice Size (DMS)	#50	#55
Burner Ports	25 Holes	49 Holes
Manifold Pressure	7" wc	11" wc
Max. Inlet Pressure	7" wc	11" wc

Dimensions:



NOTE: All Clearances are measured from the glass (and glass frame).

Installation Warnings:

- ! This appliance is designed for outdoor use only, in well-ventilated areas.
- ! Failure to follow all of the requirements may result in property damage, bodily injury, or even death.
- ! This torch must be installed by a qualified installer.
- ! This appliance is designed to operate on natural gas, or propane (LP).
- ! Notify your insurance company before hooking up this appliance. All relevant information on the Helix Torch is located on page 2, ***Important Information.***
- ! The requirements listed below are divided into sections. All requirements must be met simultaneously. The order of installation is not rigid – the qualified installer should follow the procedure best suited for the installation.

Packing List

- Main Assembly
- Burner Top
- (4) Support Bars (w/ screws)
- Top Plate
- Rain Cap
- 5/32" Hex Wrench
- Control Cover (pre-installed)
- (4) ¼-20 x ½" Hex Head Screws

Additional Items Required

This Torch Requires One of the Following Base Assemblies:

- Wall Mount Kit
- Deck Mounting Kit
- Column Mounting Kit

Recommended Order of Installation

1. Determine the location of the torch, making sure all clearances and requirements are met (see page 7).
2. Run the gas line and install through the deck, column, or wall mount (see the instructions included with these kits).
3. Attach the torch assembly to the gas line and attach the torch assembly to the mount (see page 9).
4. Assemble the torch (see page 10 - attach the rain cap if desired – see page 11).
5. Bleed the gas line then start the torch (see page 14). Verify the torch works correctly and there are no gas leaks.
6. Give this manual to the homeowner and explain operation of the torch.

Placement Requirements

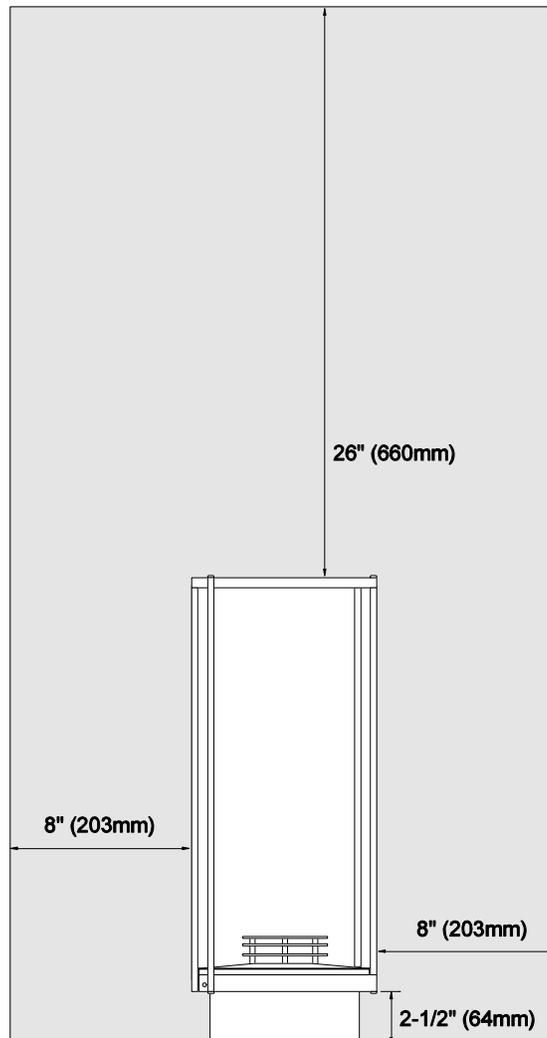
! For Outdoor Use Only. Install in well-ventilated areas.

Do Not Locate the Torch:

- In high traffic areas.
- Under or near trees, plants and buildings where debris may constantly fall into the torch. Excessive debris will require high maintenance and/or cause malfunctioning of the torch.
- In places where people, children, and pets may contact the torch. Guards or fences around the torch in these locations are recommended.
- In places where the controls beneath the torch may be submerged under water. Submerging of any part of its controls will require complete replacement of the controls.

Clearances:

- The distance from ground level to the base of the burner shall be a minimum of 7 ft. (2.1M) where installed within 2 feet (0.6M) of public walkways (e.g.: sidewalk, shared walkway between two homes, or pathway in commercial applications). Lesser clearances shall be permitted to be used only where acceptable to the authority having jurisdiction.
- Keep combustibles away from the shaded heat zone of the torch (see illustration below).



Gas Line Requirements

MASSACHUSETTS INSTALLATIONS - **WARNING:**

THIS PRODUCT MUST BE INSTALLED BY A LICENSED PLUMBER OR GAS FITTER WHEN INSTALLED WITHIN THE COMMONWEALTH OF MASSACHUSETTS.

OTHER MASSACHUSETTS CODE REQUIREMENTS:

- Flexible connector must not be longer than 36 inches.
- Shutoff valve must be a "T" handle gas cock.
- Only direct vent sealed combustion products are approved for bedrooms or bathrooms.
- Fireplace dampers must be removed or welded in the open position prior to the installation of a fireplace insert or gas log.
- A carbon monoxide (CO) detector is required in the same room as the appliance.

! The gas line must be installed in accordance with all local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, International Fuel Gas Code, Natural Gas and Propane Installation Code, CSA B149.1, or Propane Storage and Handling Code, B149.2, as applicable. Consult your local gas supplier or propane gas dealer for code regulations and recommended procedures.

! The torch and gas control valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig. For pressures less than 1/2 psig, isolate the gas supply piping by closing the manual shut-off valve.

! Leak test all gas line joints and the gas control valve prior to and after starting the torch.

LP and NG Configuration

This torch is shipped either for natural gas or for propane. **The torch is not convertible from one fuel to another.** Check the sticker on the control panel to make sure the correct fuel is used. The torch has unique orifices and burners for each fuel. See the table below for details.

	NG	LP
Input Rating (Btuh)	20,000	20,000
Orifice Size (DMS)	#50	#55
Burner Ports	25 Holes	49 Holes
Manifold Pressure	7" wc	11" wc
Max. Inlet Pressure	7" wc	11" wc

Gas Line Connection

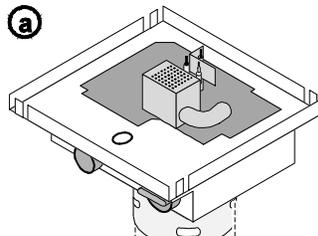
A manual shutoff valve is required on the gas supply to the torch. It should be placed upstream of the flex line. A shut-off valve is included with the optional wall-mount kit.

NOTE: This version of the Helix torch may not be connected to a portable LP cylinder.

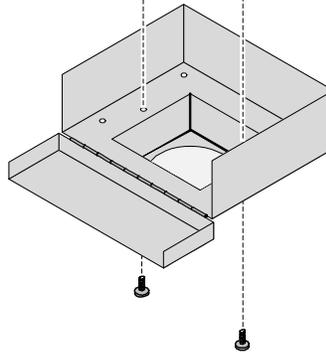
Deck Mount and Control Cover Installation

A deck mount and control cover are pre-attached to the torch for use with the optional post (3" round lamp post) or column mount. If using the wall mount, use the control cover included with the wall mount kit.

- (a) Detach the control cover from the torch assembly. Keep the two thumb screws used to attach the cover.

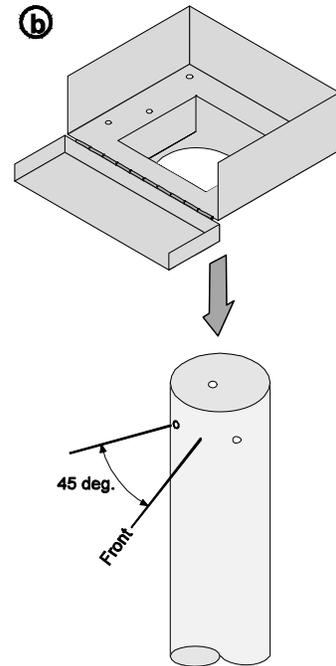


- (b) Slide the control cover over the post.



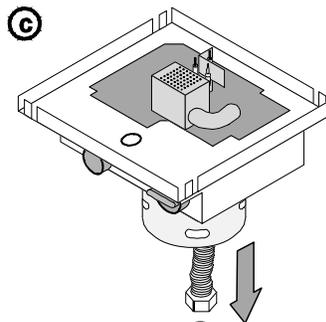
HINT: Use low-tack tape to protect the post from scratches.

NOTE: When installing the post, make sure the post is positioned with the mounting holes 45° offset from the front. The post mount has obround holes that allow 20° of rotation (10° in each direction).

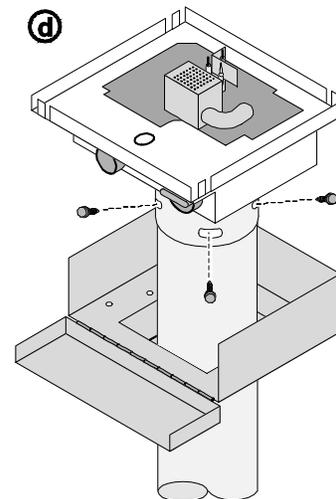
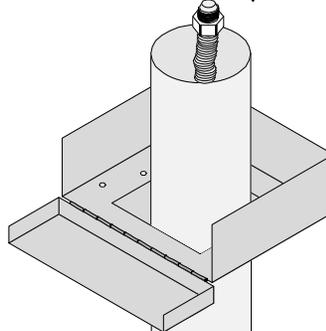


- (c) Attach the gas line.

WARNING: Take care when handling the torch assembly to not damage the gas line.

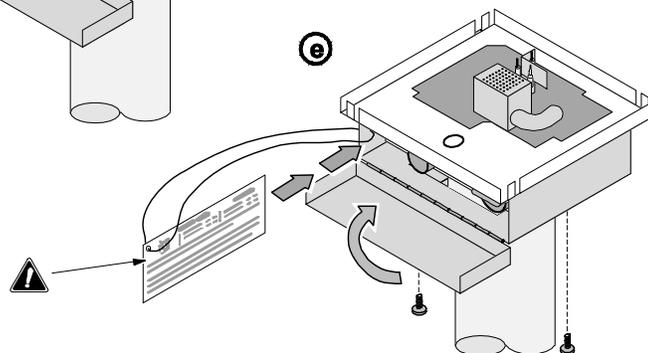


- (d) Attach the torch to the post using the included 1/4-20 screws.



- (e) Attach the control cover to the torch with the two thumb screws.

! The safety label slides into place between the control cover and the torch body.



Torch Assembly

- (a) Place the burner top over the main assembly. Make sure the burner top is fully seated.

! Make sure the wet weather lighter openings line up.

- (b) The support bars are shipped with two screws pre-installed. Remove the screws from the support bars and attach the four bars to the main assembly. Make sure the bars are properly aligned (square to the edge of the main assembly).

- (c) Attach the top plate.

NOTE: If using the optional rain cap, you may wish to install it now before the glass is installed (see page 13).

- (d) Slide one piece of glass into place until it contacts the support bar.

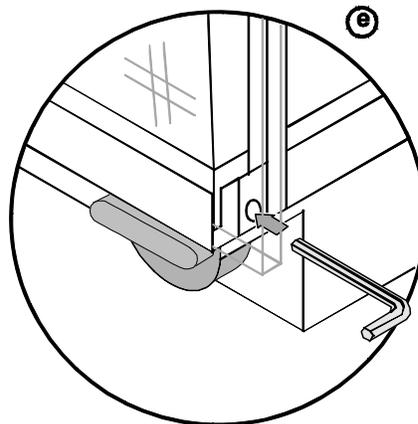
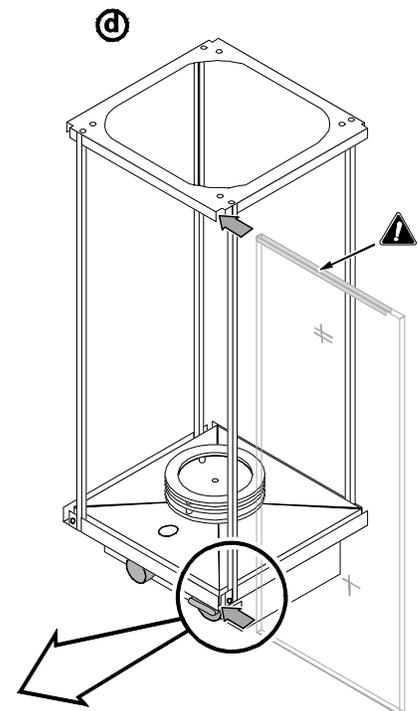
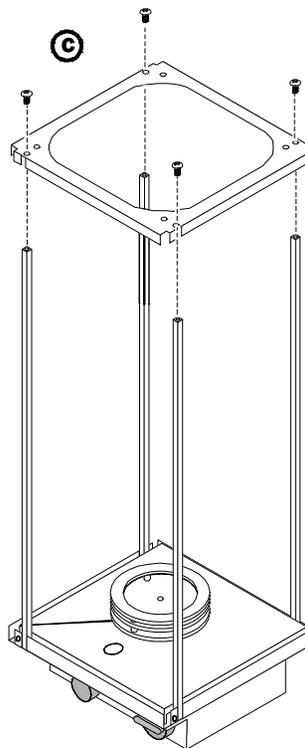
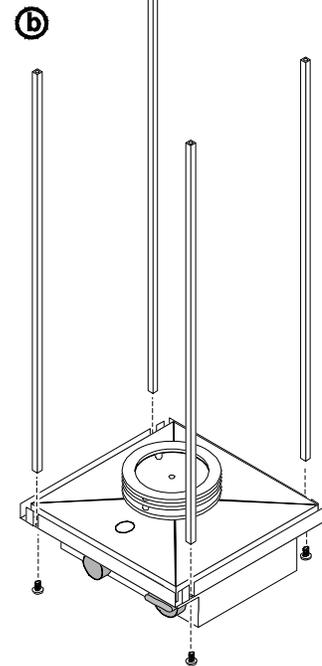
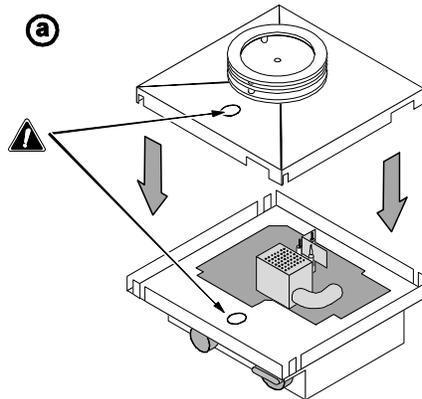
! Make sure the teflon tape is at the top of the glass with the wrap-around edge facing inwards.

HINT: Make sure the glass is clean before installing and handle with soft gloves or other non-marking material (e.g. paper towel).

- (e) Use a 5/32" hex wrench to tighten the glass support bolt.

! Tighten the bolt only enough to hold the glass in place – **overtightening may break the glass.**

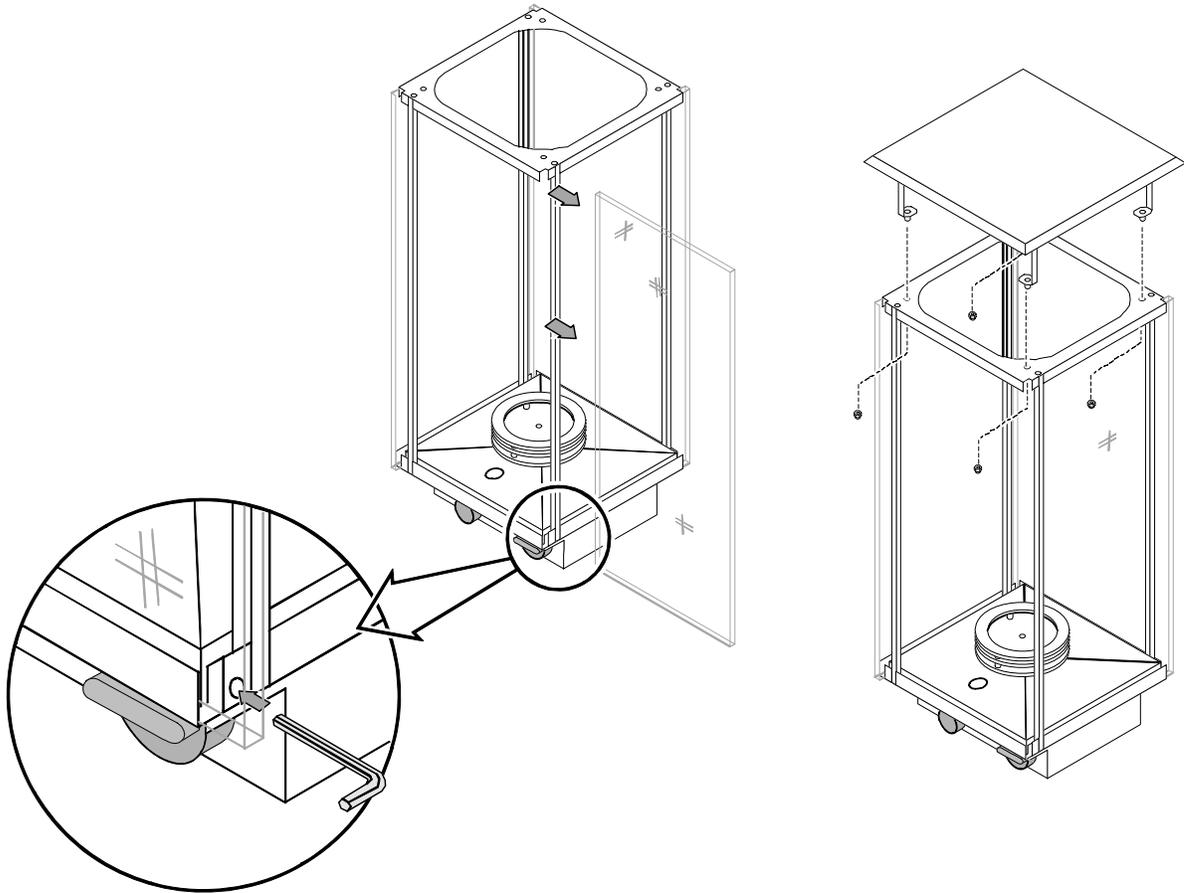
Repeat steps "d" and "e" for the other three pieces of glass.



Optional Rain Cap

The optional rain cap may be installed to suit the installation location. If the torch is located in an area where rain or plant debris is prevalent, you may wish to permanently mount the rain cap to the torch with the included nuts.

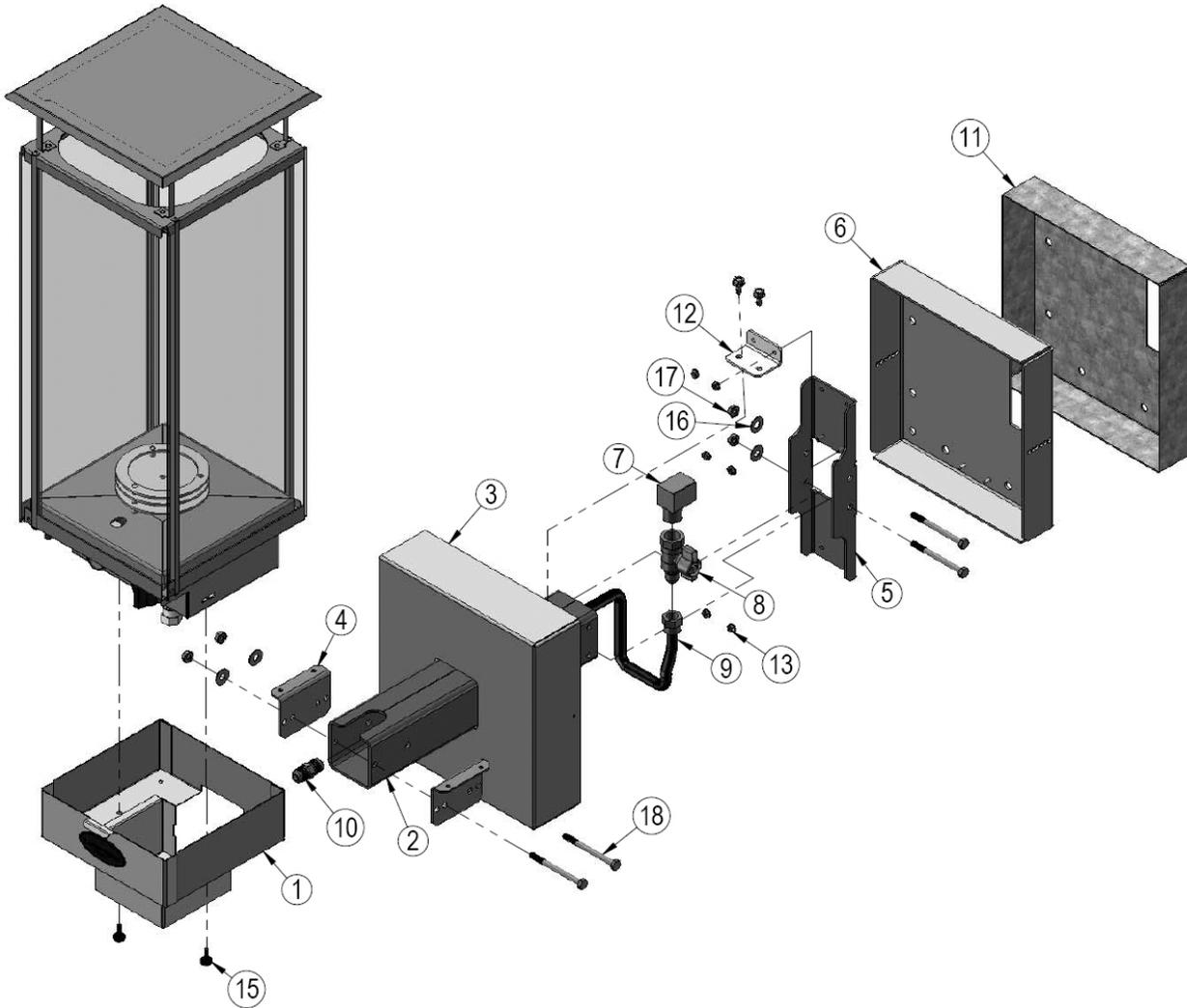
Place the rain cap on top of the torch so the four studs insert through the top plate. With one or two pieces of glass removed, secure the rain cap using the included nuts (shipped pre-attached to the rain cap).



Wall Mount Kit

An optional wall mount kit is available for mounting the Helix torch to a wall (or other horizontal structure). See the the wall mount kit for full set of assembly and installation instructions.

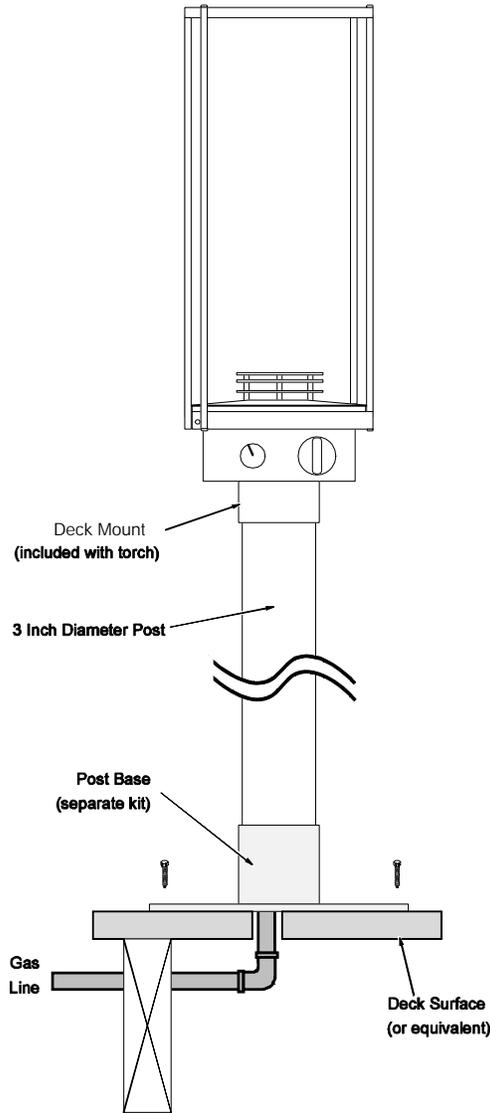
NOTE: The control cover and post mount are not used when using the wall mount kit.



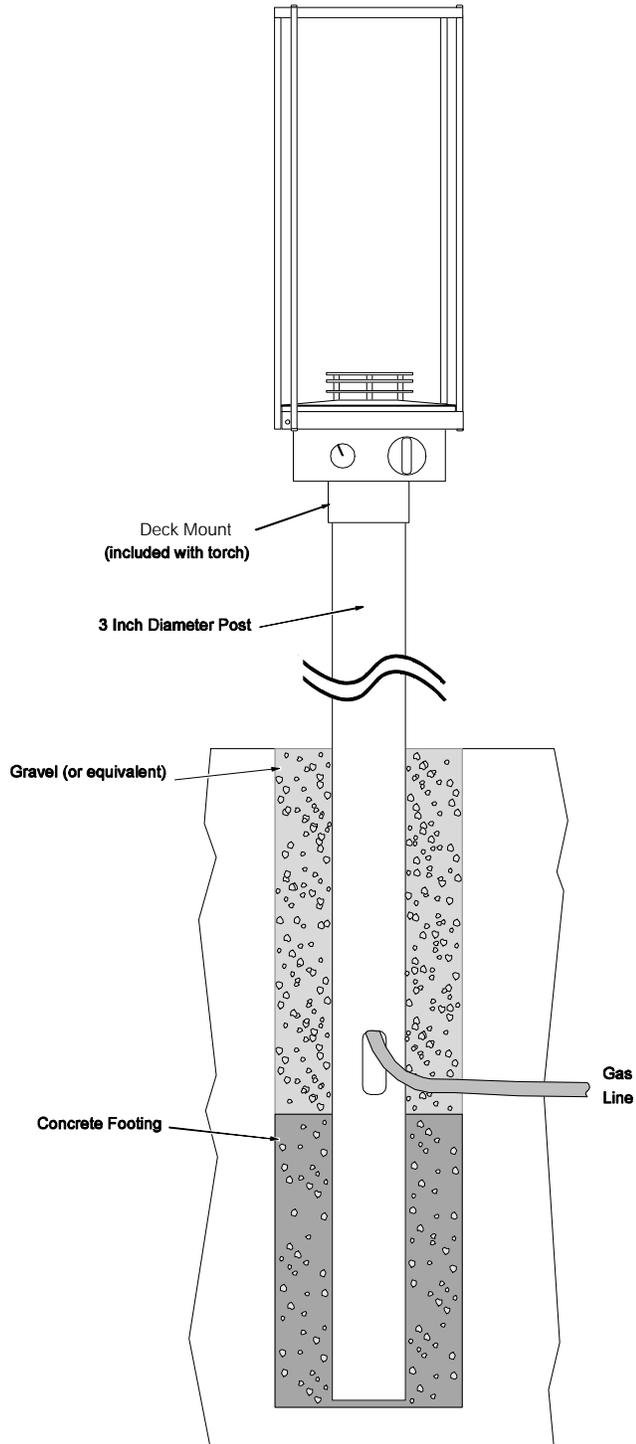
Deck or Column Mounted Torch

The Helix torch may be mounted to a 3" diameter post using the included post mount. This post may be surface mounted on a deck or similar platform with the optional post base kit. If the post is placed in a remote location, it may be sunk into the ground using concrete or other suitable means. See the post or post base kit for assembly and installation instructions.

Deck Mount or Column Mount



Free-Standing Post Mount



Before You Begin

- ! Read this entire manual before you use your new torch, especially the section "Safety Precautions" on page 4. Failure to follow the instructions may result in property damage, bodily injury, or even death.
- ! Remove any cover from the torch prior to operation (the optional stainless-steel rain cap may be left in place).
- ! Inspect the torch to make sure it is free of debris or objects that may have fallen into the torch prior to operation.
- ! Inspect the torch, burner, and supply lines for any damage prior to operation. The burner must be replaced prior to the appliance being put into operation if it is evident that the burner is damaged. Use only Travis Industries replacement burners.
- ! It may be difficult to see the burner operating in direct sunlight.

Operating Instructions

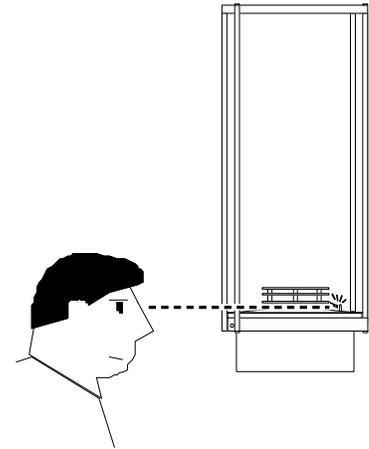
WARNING: Do not continue to push in the valve control in if the torch does not light. By pushing the valve control in, you are allowing gas to flow to the torch, creating an explosion hazard. If the torch does not light, push the valve control in and rotate the valve to the OFF position.

Lighting the Torch – DRY WEATHER

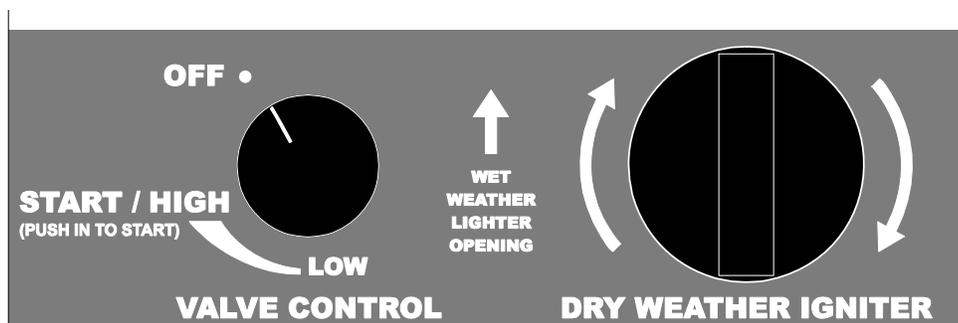
NOTE: If re-lighting, make sure the torch remains off for a minimum of 5 minutes before re-lighting.

1. Push valve control in and turn counter-clockwise to START/HIGH position, then release.
2. Turn the DRY WEATHER IGNITER clockwise to create spark (continue turning while performing step #3).

WARNING: Make sure the igniter is sparking before continuing to step 3. The spark is best viewed by adjusting your viewing angle so eye level is level with the burner top (see the illustration to the right). The spark typically jumps from the spark electrode to the burner ring.

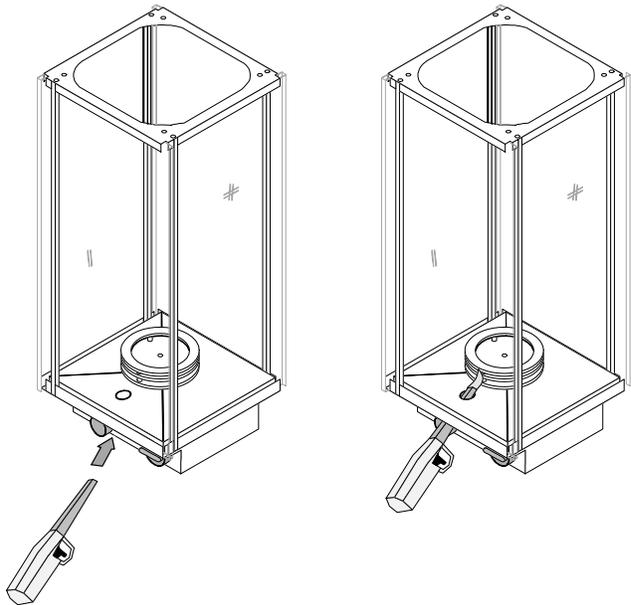


3. Push and hold valve control in. Torch must light within 5 seconds. After torch lights continue to hold valve control in for 15 seconds. Note – if torch does not light use a wand lighter in the wet weather lighter opening and perform step #3 to light.



Lighting the Torch – WET WEATHER

1. Push valve control in and turn counter-clockwise to START/HIGH position, then release.
2. Insert a wand lighter through the WET WEATHER LIGHTER OPENING.
3. With the wand lighter lit, push and hold valve control in. Torch must light within 5 seconds. Remove the wand lighter. After torch lights continue to hold valve control in for 15 seconds. Note – if torch does not light with a wand lighter directly next to the burner with the valve control pressed in in the START/HIGH position, gas is not reaching the torch.



Turning the Torch Off

1. Push valve control in and turn clockwise to the OFF position. Note – if excessive wind or rain extinguishes the flame the safety control automatically turns gas off.

Maintaining Your Torch

! **Failure to inspect and maintain may lead to malfunctioning of the appliance and potentially dangerous situations.**

- Inspect torch prior to each use.
- Keep torch clean, remove any debris that collects in or on torch. Inspect for spiders and insects, they may clog burner ports or air inlets and need be removed before using.
- Have the appliance inspected by a qualified service technician annually.
- The stainless steel burner top will discolor – this is normal.

Your Helix torch is designed to be cleaned and maintained easily. The most common maintenance that your torch will require is glass cleaning. This is done by loosening the glass retaining screws. Each piece of glass will have its own retainer. Hold the glass by the exposed edge and slide horizontally out of its tracks, the glass should slide easily if its retainer screw is loose.

Clean with glass cleaner or warm soapy water. The glass on your Helix is tempered and designed for safety. If it breaks it will shatter into small square pieces similar to a car windshield. It is special glass and if you break one or need to replace a piece use only 3/16" thick tempered glass supplied by Grand Effects, Inc.

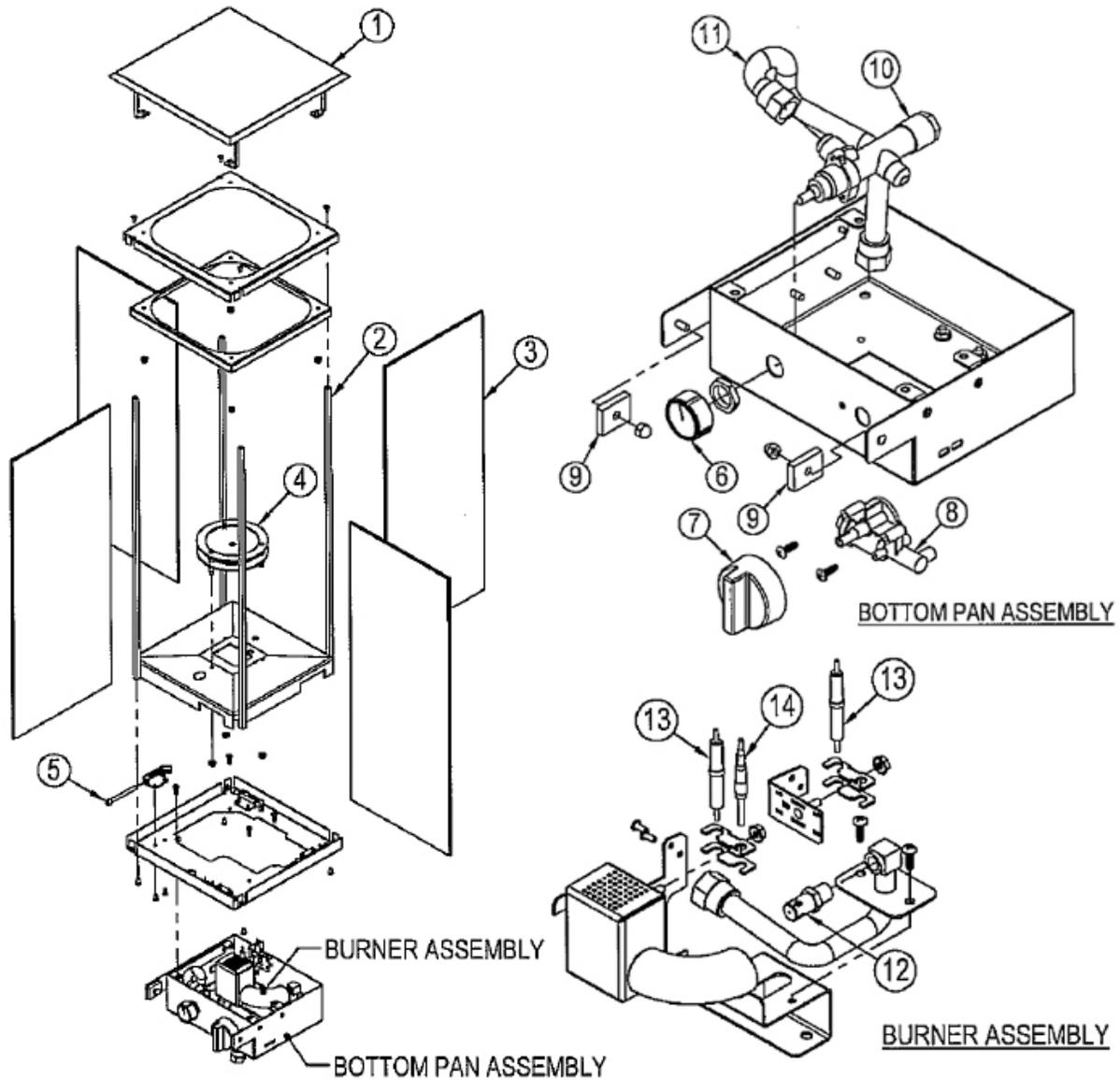
To inspect for or clean debris out of the inside of your torch remove one piece of glass. This will provide access to the inside of your torch. Once your glass piece is out remove the pyramid shaped piece with the rings on the top by lifting it straight up, once you are clear of the burner elements turn it sideways and remove through the glass opening. This will provide you a clear view of all the torch components, visually check for and remove all foreign objects, vegetation, bugs, debris. When reassembling make sure you orient the Pyramid plate correctly, the burner elements that stick up through this plate are delicate. Once oriented, slide the plate straight down onto the burner assembly making sure the edges are seated all the way down.

Winterizing The Torch.

These procedures only apply to areas where the torch will not be used during winter or for a long period of time.

1. Shut off gas supply to the torch.
2. Place the included rain cap over on top of the torch. If additional protection is desired, a cover may be placed over the torch, making sure it does not damage the glass.

Replacement Parts



Replacement parts can be obtained from contacting Grand Effects, Inc. - (949) 697-5270

Troubleshooting Table

Problem:	Possible Cause:	Don't Call for Service Until You:
Torch Does Not Light	Check shut-off valve.	Verify shutoff valve is turned ON.
	Gas is Off	Turn Gas On
Igniter Does Not Spark	Igniter is wet	Use the wet-weather starting instructions.
Flames are too short (under 6")	The gas supply pressure to the appliance is too low.	Depleted LP cylinder. Gas supply lines or gas regulators do not have enough capacity. This maybe due to other appliances in the house using up the available capacity, e.g. pool heaters, furnaces, hot water tanks, etc.
Flames are not Spiral	Torch was just turned on	It takes 5 to 10 minutes for the torch to start up and the flame to form a spiral.
	Windy Condition	Wind will influence the flame shape
Glass is Sooting	Burner or burner orifice may be dirty or blocked	Contact your dealer for details on removing any debris (spider webs, etc.) from the burner and orifice area.
	Windy Condition	Wind will influence the flame quality and, if persistent, may lead to sooting on the glass.
Torch makes Clicking Sounds	Glass is moving inside the glass frame and the stainless steel parts are expanding and contracting with heat	THIS IS NORMAL

Grand Effects Limited Warranty

1 Year Residential /6 Month Commercial

Grand Effects will replace, at its expense, any unit, which in normal use, has proven to be defective in workmanship or material, provided that the customer returns the product prepaid to Grand Effects with proof of product within one year and provides Grand Effects with reasonable opportunity to verify the alleged defect by inspection. Grand Effects will not be responsible for any asserted defect, which has resulted from misuse, abuse, repair or alteration. Under no circumstances will Grand Effects be liable for incidental or consequential damage resulting from defective products. This warranty is Grand Effects' sole warranty and sets forth the customer's exclusive remedy, with respect to defective products, all other warranties, expressed or implied, whether of merchantability, fitness for purpose or otherwise, are expressly disclaimed by Grand Effects. Grand Effects is not responsible for any injury or mishap related to misuse, abuse or lack of judgment choosing fire display locations.

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