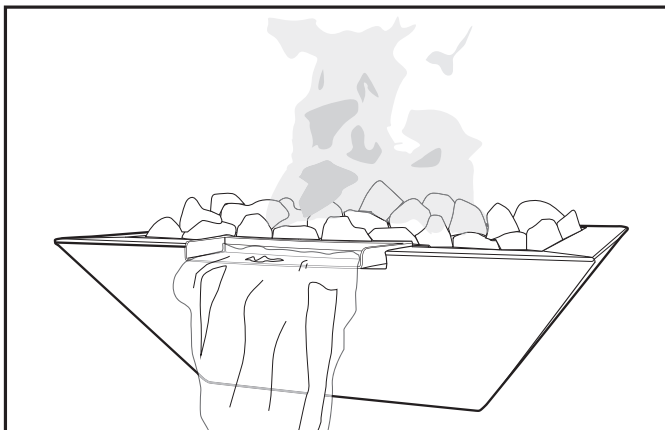




OPERATION AND MAINTENANCE MANUAL

GRAND EFFECTS
FIRE & WATER ELEMENTS



Grand Effects® Fire and Water Bowls Standard Line Manual Operation

⚠ WARNING

IF THESE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT, CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

FOR YOUR SAFETY: This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed where such state or local requirements exist. In the event no such state or local requirement exists, the installer or maintainer must be a professional with sufficient experience in pool equipment installation and maintenance so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation can create carbon monoxide gas and flue gases which can cause serious injury, property damage, or death. For installations in the vicinity of occupied/living spaces, as an additional measure of safety, Zodiac Pool Systems LLC strongly recommends installation of suitable carbon monoxide detectors in the vicinity of this appliance and in any adjacent occupied spaces. Improper installation and/or operation may void the warranty.

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

WHAT TO DO IF YOU SMELL GAS

- Immediately switch off main gas supply.
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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Section 1. Important Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS READ AND FOLLOW ALL INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

WARNING

Before installing this fire and water bowl, read and follow all warning notices and instructions accompanying this bowl. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.

Visit www.zodiacpoolsystems.com for additional free copies of these instructions or call Zodiac Technical Support at 800.822.7933 (U.S.) or Grand Effects at 949.697.5270

ATTENTION INSTALLER

This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

WARNING

This unit is for outdoor use only.

Required Clearances: Sides 4 ft / Top 6 ft.

SAVE THESE INSTRUCTIONS

Section 2. General Description

2.1 Product Overview

This manual provides instructions for installing and replacing the Grand Effects® Fire and Water Bowls.

⚠ CAUTION

The Grand Effects Fire and Water Bowls are not serviceable and therefore contain no serviceable parts. In order to prevent risk of property damage and/or injury, no service should be attempted to the bowl in the event of a malfunction. The Fire Box Burner Assembly must be sent back to a Grand Effects service center for repair. A certified gas professional should remove and re-install the Fire Box Burner Assembly.

2.2 Product Contents



- | | | |
|----|---|-------|
| 1. | Grand Effects Fire and Water Bowl | Qty 1 |
| 2. | Mounting Bracket | Qty 1 |
| 3. | Support Plate | Qty 1 |
| 4. | Burner Assembly | Qty 1 |
| 5. | Grand Effects Fire and Water Bowl Manual Operation and Maintenance Manual | Qty 1 |

Section 3. Installing Grand Effects® Fire and Water Bowls

3.1 Preparing the Fire and Water Bowl for Installation

NOTE: The installer must complete preparatory steps before fire and water bowl is installed.

Metallic equipment, including metallic gas piping, shall be bonded in accordance with the National Electrical Code® in the US, and Canadian Electrical Code in Canada.

BONDING

In the United States the National Electrical Code® (NEC®) and in Canada the Canadian Electrical Code (CEC), require that all metallic components of a pool structure, including reinforcing steel, metal fittings and above ground components be bonded together (forming an equipotential bonding grid) with a solid copper conductor not smaller than an 8 AWG (6 AWG in Canada).

Additionally, Zodiac Pool Systems LLC, requires that as required by Article 680 of the NEC, the appliance be properly connected to an equipotential bonding grid/loop that includes all electrical equipment in the system and on the equipment pad. Bonding lugs must be connected with a solid copper wire at least 8 AWG (6 AWG in Canada) or larger. Failure to do so may void the Zodiac Pool Systems LLC warranty.

CAUTION

To prevent premature failure of the appliance resulting from stray voltages and voltage differentials, the metal bowl and burner must be bonded to other equipment which is part of the pool plumbing system with a solid copper wire not smaller in diameter than 8 AWG (6 AWG in Canada).

BONDING A METAL BOWL (COPPER OR ALUMINUM)

NOTE: A bonding lug is not provided for the bowl. These steps only apply to metal bowls.

1. Attach the mounting bracket to the surface/floor. See Figure 4.
2. Wrap copper bonding wire around a securing bolt between the clamp ring and washer. See Figure 1 for mounting bracket components.
3. Slide the clamp ring onto the securing bolts of the mounting bracket. The clamp ring, washer and nut are placed inside of the bowl to secure the bowl and bonding wire to the mounting bracket.

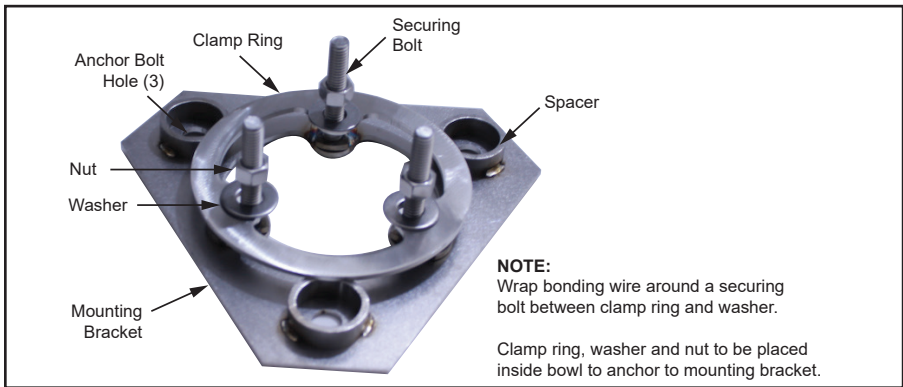


Figure 1. Mounting Bracket Components for Securing and Bonding of Bowl

BONDING THE BURNER

NOTE: The Burner insert contains a bonding lug under the bottom of the burner. See Figure 2.

1. Loosen the setscrew.
2. Insert the bond wire into the hole.
3. Tighten the setscrew until the bond wire is secured into place.

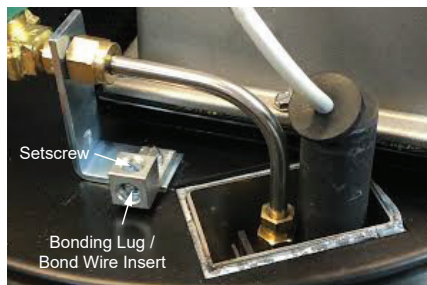


Figure 2. Bonding Lug on Burner Assembly

3.2 Gas Requirements

| | | |
|------------------------|---------------|---------------|
| Gas Type | Natural | Propane |
| Gas Pressure (Nominal) | 7" wc | 11" wc |
| Water Flow | 15 gpm | |
| Gas Flow | 1 Bowl System | 60,000 btu/hr |

NOTE: Check with your gas supplier to verify gas flows and pressures available at the location of your installation. In many cases utility companies will install larger meters at no charge to accommodate larger flows.

3.3 Installing the Fire and Water Bowl

⚠ WARNING

Do not install near any combustibles such as wood structures, fuels, clothing, fabrics, or dry vegetation.

Keep surrounding area clear of all debris such as paper, leaves, pine-needles and other combustible materials.

⚠ WARNING

This unit is for outdoor use only.

Required Clearances: Sides 4 ft / Top 6 ft.

Install bowls out of the way of pedestrian traffic.

Installation shall be performed by a licensed contractor. All aspects of installation must conform to local or national codes, or in the absence of codes, with Natural Fuel Gas Code NFPA® 54 / ANZI Z223.1.

An approved gas valve or keyed valve shall be installed upstream of the unit and located in an accessible area that is within 5ft from the Grand Effects Unit.

The approved gas valve must be located where they can be easily accessible so that the gas can be shut off quickly in case of an emergency.

1. Install the Grand Effects® Unit as shown in Figure 3, Figure 4, and Figure 5.
2. The gas piping must be installed underground between each fire or water bowl, as shown in Figure 3.

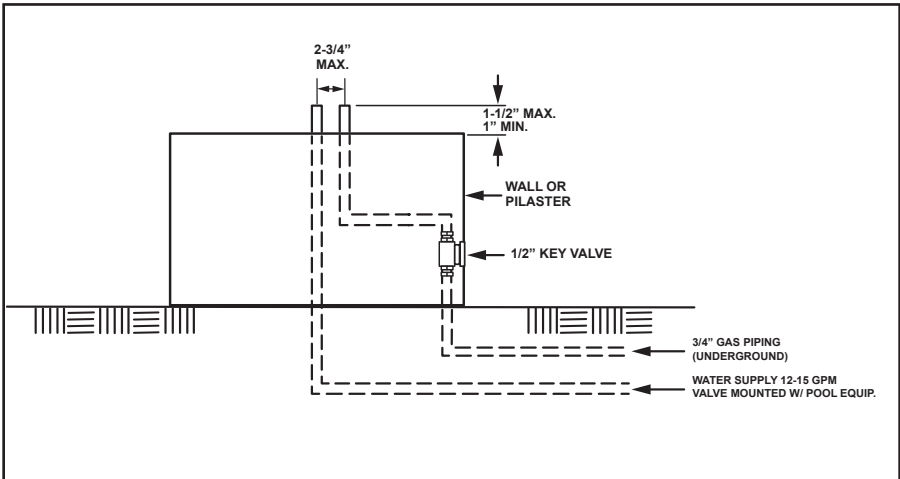


Figure 3. Piping

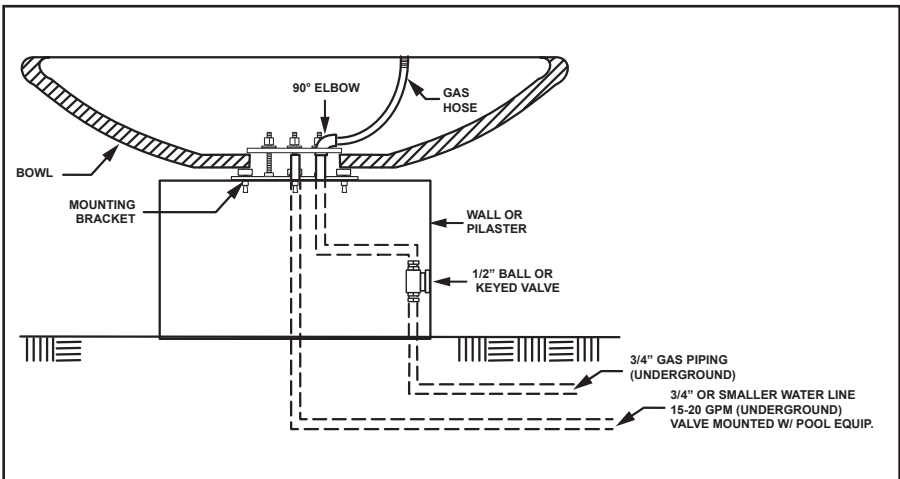


Figure 4. Mounting

3. The piping must be reduced to $\frac{1}{2}$ " NPT or larger at each bowl, as shown in Figure 3.
4. Maintain good piping practice by keeping pipe length and elbows to a minimum to eliminate unnecessary pressure drops. Corrugated flex gas lines should not be used.

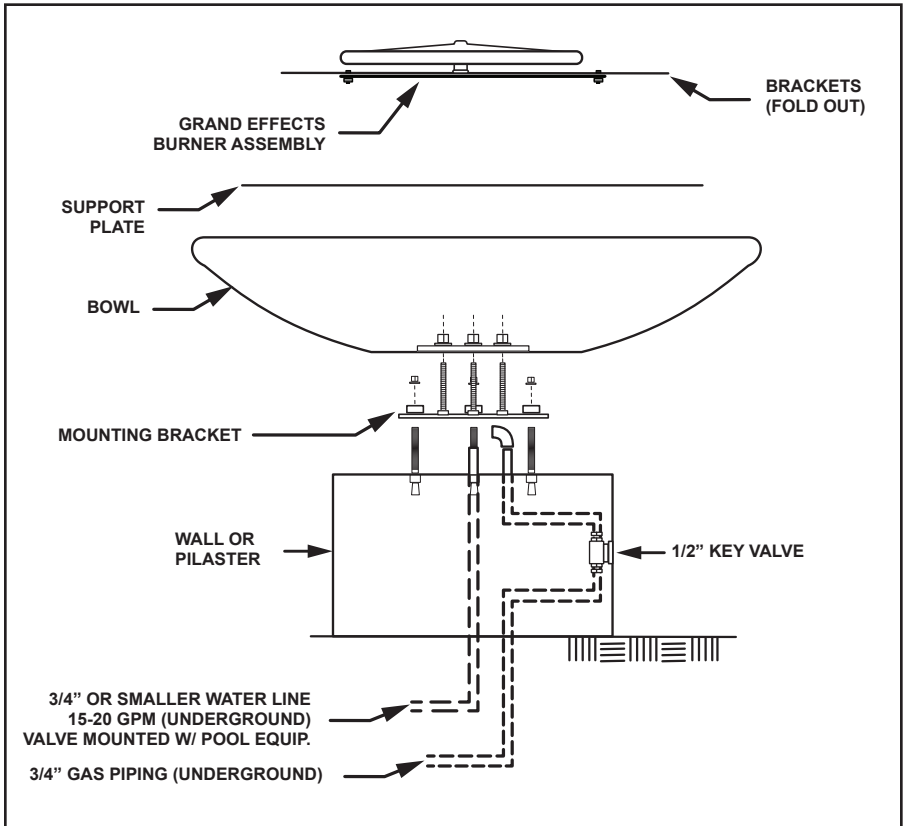


Figure 5. Bowl Components

5. Gas should be centered in the middle of the column.
6. Customer-supplied bowls should be similar in size to Grand Effects® bowls: 27" min. ID x 9" min. Inner height with a 4" hole in the bottom of the bowl.
7. Install the mounting bracket as shown in Figure 4.
 - a. Center the mounting bracket on the column.
 - b. Use wedge anchors (i.e. Red Heads®) to secure the mounting bracket to the column.
 - c. Remove the clamp ring, nuts and washers and set aside for the following step to secure the bowl.

8. Secure the bowl on to the mounting bracket.
 - a. Center the bowl on top of the mounting bracket, with the bowl's bottom resting on the mounting bracket's three spacers.
 - b. Install the clamp ring onto the three (3) securing bolts and fasten to the bottom of the bowl using a nut and washer on each securing bolt.
9. Install a 3/8" 90° pipe elbow and gas hose at the gas connection as shown in Figure 4.
10. Connect gas hose to the burner assembly.
11. With all gas connections tight, position the burner assembly so that it sits level in the bowl. Rotate as required so that the gas hose rests in a compact position.

IMPORTANT: The mounting bracket must be installed for proper cooling of the burner assembly. Warranty may be voided if the mounting bracket is not installed. Do not kink or make sharp radius on the metal gas hose. Do not come straight up with the gas hose. As shown in Figure 4, a 90° gas pipe elbow must be installed on the gas line for proper installation of the gas hose.

The product warranty may be voided if the hose is not installed with an elbow as shown in Figure 4.

Section 4. Burner Setup and Adjustment

Note: Each burner should have a flame height of approximately 12" – 15" from the top of the bowl.

1. The height of the flame can be adjusted at each burner by opening or closing the 1/2" gas valve or keyed valve located at each column as shown in Figure 4.

Each burner should be adjusted as required so that the flame size at each bowl is similar in appearance to each other.

2. After all burners have been adjusted, make sure that the burner assembly is repositioned so that it is sitting level in each bowl.
3. Install decorative rock or glass on top of the "burner support" and burner assembly. Larger lava rock is recommended (2" - 4" in size). It will work better than smaller rock.

NOTE: Do not use glass with propane installations. If you use glass with natural gas, you will need to lay down pre-cut stainless mesh screen (supplied by Grand Effects®) to prevent glass from falling through.

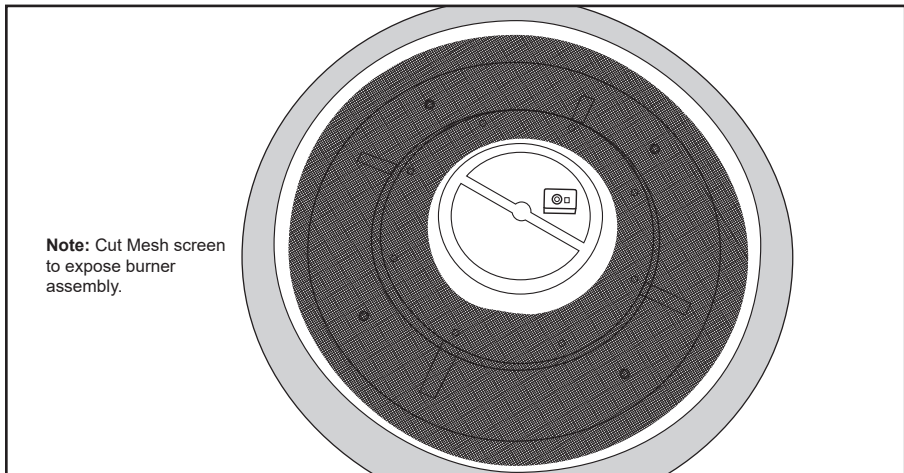


Figure 6. Mesh Screen Installation

⚠ WARNING

Lava rock is an accepted media for fire features. To avoid the risk of property damage and serious injury, including death, use caution when in the immediate area, as pieces may pop or explode when exposed to heat or when wet and exposed to heat.

IMPORTANT: Do not use fire glass with propane installations.

Section 5. Maintenance

Periodically clean the burner assembly and bowl with a wet cloth or cleaning solution to remove carbon build-up.

Frequency of the cleaning will depend on usage.

Frequently inspect the gap between the base of the bowl and the mounting bracket. It should be kept free of dirt and debris that may restrict cooling air and drainage (see Figure 7).

Periodically inspect the underside of the burner assembly for any signs of excessive temperatures.

Check that all gas connections are tight.

The burner assembly should be covered and protected from snow and ice. The burner should not be operated in high wind conditions.

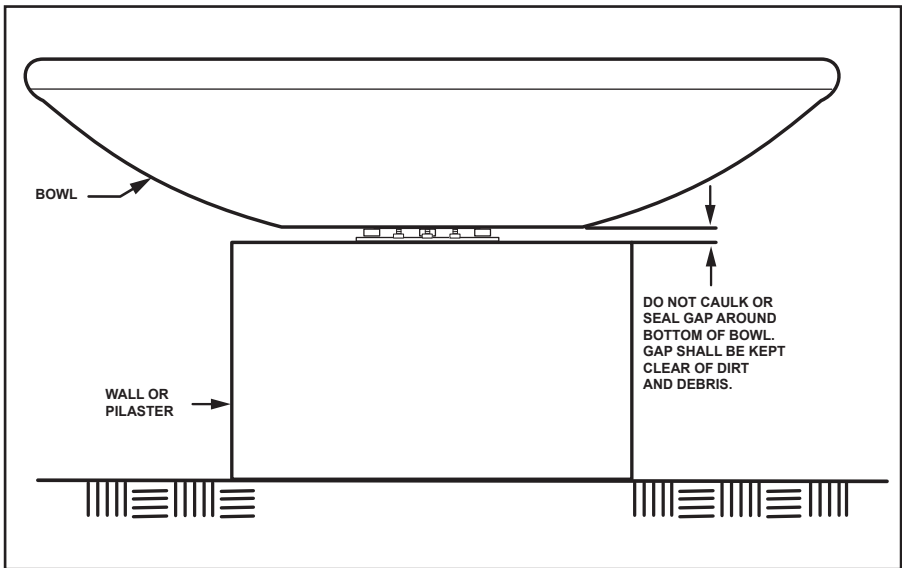


Figure 7. Maintenance

Note: If any problems are present, consult a licensed heating professional or call Grand Effects®.

Section 6. Operation

⚠ WARNING! This unit is for outdoor use only. For your safety:

- If you smell gas, shut off the gas valve immediately.
- Extinguish any open flame.
- If odor continues, immediately call your gas supplier.
- Do not store or use gasoline or other flammable vapors and/or liquids in the vicinity of this appliance.
- Do not leave flame on while unsupervised.
- Do not operate in windy or rainy conditions.
- Unit should be operated only by a responsible adult.
- When in use, an open flame is present; therefore, use with extreme care and at your own risk.
- Before any inspection of the unit, always turn off gas supply.
- If you experience problems with this unit, call Grand Effects® or a licensed heating professional. All work on this unit must be performed by a licensed heating professional.

⚠ WARNING

To avoid the risk of property damage and serious injury, including death, before you turn on the Grand Effects System, make sure that features are clear of people, animals, or any objects that are combustible.

6.1 Operating Instructions

With the gas valve in the closed position, check the Grand Effects Unit for any gas smell or indication of a gas leak. If you smell gas or see evidence of a gas leak, do not operate the Unit. Immediately call your utility gas supplier to inspect the unit.

If there is no evidence of a gas leak, crack open the gas valve located at each column and immediately light the burner with an approved lighting device.

The height of the flame can be adjusted by opening or closing the ball valve or keyed valve.

To turn the Unit "OFF", close the gas valve to the fully closed position.

NOTES

NOTES

Grand Effects

23121 Arroyo Vista, Suite B, Rancho Santa Margarita, CA 92688
1.949.697.5270 | www.GrandEffects.com

Fluidra

2882 Whiptail Loop #100, Carlsbad, CA 92010
1.800.822.7933 | www.ZodiacPoolSystems.com

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