



# SOLAR - MACH LIT & ELECTRONIC IGNITION FIREPITS

## Firepits Care and Maintenance Information

Thank you for choosing our Hard by Design Solar Firepit. Our Firepits are handmade using a custom engineered proprietary concrete mix that we have developed ourselves. All of our products have been finished and sealed with our standard sealant for both interior and exterior use.

As with every natural product, concrete will react to its environment and naturally weather and patina as it ages. Products are not under warranty against staining. Cleaning regularly and covering your firepit when not in use will protect it from rain, snow, and adverse weather conditions.

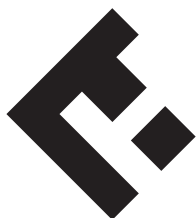
### FIREPIT CARE/MAINTENANCE AND CLEANING

- Ensure the burner and pilot area is kept clean and clear of dirt and water residue especially anything combustible. This can be achieved by vacuuming or brushing this area as frequent as necessary.

- Make sure burner porting and burner air vents at the base of your firepit are free of obstructions at all times.
- We recommend using a mild solution of a non-abrasive cleaner. We would recommend Method All-Purpose Natural Surface Cleaner. Spray this solution across the surface and wipe down with a sponge or towel.
- The use of most natural cleaners (often citrus based) is not recommended for cleaning our firepits, as typically these cleaners are highly acidic and can damage the natural materials used in creating our concrete firepits.
- The use of aggressive cleaning agents or any other chemicals that are reactive to the concrete will wear down the sealant and permanently stain and damage the concrete surfaces, therefore should not be used.

### COVER

- We recommend using an optional cover (available in powder coated colour matched aluminium, in colour matched timber and in glass) whenever the firepit is not in use and during adverse weather conditions. Allow plenty of time for the firepit to cool before covering.
- We also recommend using the included weatherproof covering, which will prolong the life of your firepit and its components.



**HARD** BY  
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Purveyors of Fine Concrete

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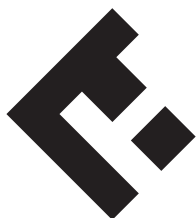
### Firepits Care and Maintenance Information cont...

#### REGULAR MAINTENANCE

- To fully care and maintain your Hard by Design firepit you should wax it periodically. Waxing your firepit provides additional protection and is a simple and quick process that should be completed on a monthly basis on areas of high use. We recommend using Trewax Clear Paste Wax. This product can be purchased online or with us at Hard by Design.
- Use the included sponge or a soft, clean cotton cloth when waxing the surfaces of the firepit. First you should dampen with clean water and wring out completely. Apply in circular motions a thin layer of wax in small manageable sections, we recommend areas no larger than 1m<sup>2</sup>.
- With the same circular motion, remove excess wax using a new clean cloth. Buffing works the wax into the concrete. Move to the next section overlapping the last section slightly to create an even finish.
- A thick layer of wax does not add extra protection or speed up the waxing process therefore should not be applied or left on the surface at any time.
- Do not apply wax to the concrete firepit in direct sunlight or in extreme heat.

#### RING & LAVA ROCK/FIREGLASS CLEANING

- Over time lava rocks and fireglass may show signs of soot. This will not damage the rocks, but the soot may build up and subsequently block the burner jets. Depending on use, they should be cleaned annually. To do this you must allow for adequate cooling time then you simply remove the rocks to wash and scrub with a stiff brush. If wet allow sufficient time for rocks to dry before use.
- If you have not used the firepit for some time, its recommended you use a brush and vacuum to keep the burner and pilot area clean. Carefully remove dust, spider webs, and loose particles such as leaves that will inevitably collect over time. The rocks should be removed during this process and once cleaned should be carefully placed back into the firepit. This should be done twice a year at least.
- Take time to inspect the burner element of your firepit. If there is evidence of damage it must be replaced with another, specified by the manufacturer.
- The control box and valve lever can be cleaned with a suitable stainless-steel cleaning product.



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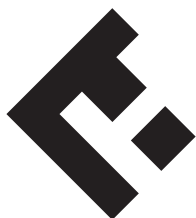
### PILOT FLAME

- The flames from the pilot should be visually checked as soon as the unit is installed as well as throughout regular operation.
- The pilot flame must always be present when the firepit is in operation.
- There are 2 distinct flames, one engulfing a flame sensor and the other reaching to the burner.

### INCIDENT PREVENTION

- Hard by Designs concrete surfaces are strong and resilient, however unintentional damage can occur but is easily avoidable.
- In order to avoid visible scratches being formed, do not place or drag sharp or coarse objects on or across the surface.
- Avoid any contact with acidic materials (citrus/olive oil etc), abrasive agents (powders, creams), non - diluted or concentrated cleaning agents, and in particular colourful ones, is strongly advised against.

- Spots/dirt caused by substances with strong colour, such as a tea, coffee, red wine, curry or mustard, must be rinsed with water or wiped with a damp cloth as quick as possible on the surfaces of the concrete, as these can be harsh on the sealant and can cause discoloration.
- The use of coasters is recommended if placing items such as plates and glasses on the firepit.
- Do not place extremely hot items (hot pans, dishes, cups) directly onto your firepit's edge as this can cause sealer discoloration.
- Be careful not to accidentally hit the edges of the rims of the firepits as this can create small chips. Chips are repairable, please don't hesitate to contact Hard by Design for further information on this.
- Felt pads are recommended for use for the bottom of objects that will remain on the firepit for an indefinite time period. Especially for unglazed ceramics or natural stone as they compete for residual moisture in the firepit which can lead to its discoloration.



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## Firepits Care and Maintenance Information cont...

### LIMITED WARRANTY

- The basic sealant used by Hard by Design for both interior and exterior products can be expected to develop a patina over time and are not warranted under staining.
- This warranty acknowledges that Hard by Design will repair or replace, at our discretion, any product that fails to meet these conditions.
- Hard by Design will give technical advice and support throughout the lifetime of our products.
- Our warranty does not guarantee against damage created through negligence, abuse, unapproved repairs or failure of substrates.
- This warranty does not cover the repair or replacement of surrounding materials should damage occur during repair or replacement of pieces under warranty.
- This applies only to products that have been handled, installed, and maintained in accordance with the guidelines recommended by Hard by Design.
- As with all natural and handmade materials. Slight variations in both colour and finish is possible and not considered a defect.

- All our products are warranted against structural cracking. Hairline cracks can form but are not considered a defect.

### REFINISHING

- Hard by Design provides a refinishing service for its customers.
- Your surfaces should provide you with years of enjoyment under normal use.
- If after several years of wear, you wish to have your concrete product created by us refinished, then please contact our office to make arrangements.
- We recommend the refinishing of our products every 2-5 years, depending on the amount of use.
- Pricing for this is based on the size of each project being refinished as well as the products location



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# SOLAR - MACH LIT & ELECTRONIC IGNITION FIREPITS

## Warning & Safety Instructions



Please read before installing and operating your new Hard by Design Solar Gas Firepit Burner

### CARBON MONOXIDE POISONING

Early signs of carbon monoxide poisoning resemble the flu, with symptoms including headache, dizziness or nausea.

If you experience these signs get to fresh air immediately, there may be a problem with your firepit. Get a qualified gas engineer to service it.

Some people are more affected than others by carbon monoxide. Including pregnant women, people with heart or lung disease or anaemia, those under the influence of alcohol and those at high altitudes.

### NATURAL GAS & PROPANE

An odorant is added to both these gases to assist in detecting leakages. This may fade therefore you must be aware of all the warning signs.

- Installation and servicing must be performed by a qualified installer or gas engineer.
- **NEVER** alter the design of the firepit.
- **DO NOT** connect the Gas Firepit to gas supply, until it has been properly installed. Firepits should be inspected prior to use and at least annually by a qualified service person.
- **DO NOT** use the firepit if there is any evidence of leaking gas or if you smell gas. If leaking gas is suspected, turn off the main gas supply at either the bottle, or at the isolating valve inside your house and repair immediately. Contact your installer.
- **DO NOT** use indoors.
- **DO NOT** use under any overhead enclosure. Flame should be at least 1200mm away from all combustible materials. Make sure there is no vegetation/combustible materials/fuel/ flammable liquids and vapours in the area close to the firepit.
- **DO NOT** burn solid fuels in the firepit. Keep all debris out of firepit.



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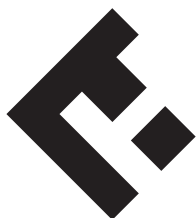
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## Warning & Safety Instructions



Please read before installing and operating your new Hard by Design Solar Gas Firepit Burner

- **DO NOT** if any part has been submerged under water, make sure any water is drained before use. Allow lava rock/fire glass to fully dry if wet before use.
- Only use provided lava rock or fire glass.
- **NEVER** use any material that is nonporous and holds moisture such as gravel, pebbles, river rocks, etc. These materials, when heated will cause the trapped moisture to boil and fracture unexpectedly. Risk of injury.
- **DO NOT** use the firepit in windy conditions as gusts may affect the burners flame in an unpredictable way. Turn off if these unsafe conditions exist.
- **NEVER** leave fire unattended or attended by an adult that is unfamiliar with emergency shut-off.
- Be aware of high surface temperatures.
- **ALWAYS** allow ample cooling time after shut-off before touching or covering firepit.
- **ALWAYS** maintain a safe distance from fire.
- **ALWAYS** isolate gas supply when not in use.
- **ALWAYS** follow instructions regarding the care and use of propane gas bottles.
- **ALWAYS** ensure the bottle is located a safe distance from the firepit.
- **ALWAYS** when changing the bottle, make sure the gas control lever is in the **OFF** position



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## Warning & Safety Instructions

### OPERATIONS - MATCH LIT

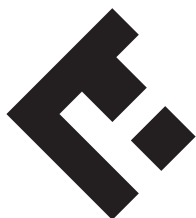
1. Firepit should be installed and inspected by a certified plumber or gas engineer before use.
2. Remove any debris found in the firepit before lighting. Lava rocks/fire glass should not cover vents.
3. If lava rocks/fire glass are wet, allow time to fully dry.
4. Place lit long handled lighter or match on top of the firepit.
5. Slowly turn on the gas valve.
6. After burner lights remove flame (lighter or match, do not place matches in fire).
7. Adjust flame to desired height.
8. If burner does not light turn valve off and allow gas to clear, then repeat steps 1-6.
9. When finished turn off key. For safety key should be removed and stored elsewhere.

10. Make sure to turn off gas line when not in use.

11. Allow firepit to cool before touching, covering or maintaining/cleaning.

12. Cover the firepit using the provided all weather cover.

**DANGER - NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS**



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### OPERATIONS - ELECTRONIC IGNITION

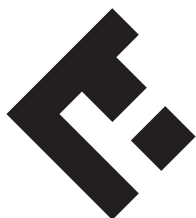
Purge air in gas lines after system installation, this may take several attempts. If after 15 attempts to light the pilot it still won't work, it will lock out. Please power off then on to restart.

1. The firepit should be installed and inspected by a certified plumber/ gas engineer before use.
2. Remove any debris found in the firepit before lighting. Lava rocks/fire glass should not cover vents.
3. If lava rocks/fire glass is wet, allow time to fully dry before using.
4. Turn on electrical power and gas to firepit.
5. Using wall switch or remote, turn on firepit - this may take several cycles to purge any air.
6. The hot wire igniter will be powered (glow red) for 5 seconds before pilot valve opens.
7. The hot wire igniter will only be powered the initial 15 seconds of the 60 second pilot cycle. This sequence will repeat up to 15 times (-15 minutes) before going into lockout. To reset, turn off then back on again.

8. Pilot flame will ignite and warm thermocouple - it may take 30 seconds at times for thermocouple to get hot. If thermocouple is not hot in 60 seconds, system will shut down then go back to Step 6.

9. Once thermocouple is hot, main valve will open allowing main burner to ignite.
10. If pilot flame is out at any time, system will shut down, then automatically restart.
11. Turn off firepit using remote control or wall switch.
12. Turn off power to electrical outlet and gas line when not in use to prevent accidental start. Power to firepit must be turned off via wall switch or breaker when not in operation.
13. Allow firepit to cool before touching, covering or maintaining/cleaning.
14. Cover the firepit using the provided all weather cover.

Overheating: The firepit will automatically close the gas valve if temperature exceeds 175° F inside valve box to prevent component damage. When unit cools below 175° F, the unit will automatically restart. To correct overheating, ensure enclosure has adequate ventilation.



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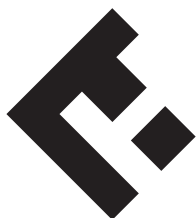
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OBSERVED PROBLEM	POSSIBLE CAUSE	SOLUTION
Burner shuts off/relights intermittently.	<ol style="list-style-type: none"> <li>1. Wind or gusts of wind (+10mph)</li> <li>2. Air present in gas line</li> <li>3. Not enough air to pilot</li> </ol>	<ol style="list-style-type: none"> <li>1. Protect pilot from wind with a decorative topping. DO NOT BLOCK IGNITION PORT.</li> <li>2. Ensure gas is thoroughly bled.</li> <li>3. Ensure vents are not obstructed.</li> </ol>
Unit is smoking/sooting excessively	<ol style="list-style-type: none"> <li>1. Poor fuel quality</li> <li>2. Excessive flame impingement or blockage</li> <li>3. Improper fuel/air mixture</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact local gas company</li> <li>2. Separate stones to allow more flame passage</li> <li>3. Remove any foreign items from the flame pattern</li> </ol>
Burner excessively noisy	<ol style="list-style-type: none"> <li>1. Passage of air/gas across irregular surfaces</li> <li>2. Excessive gas pressure on natural gas units</li> </ol>	<ol style="list-style-type: none"> <li>1. Relieve any tight bends in supply</li> <li>2. Check/reset gas regulator pressure</li> </ol>
Gas odour when power is off	<ol style="list-style-type: none"> <li>1. Gas leak. See warning page</li> <li>2. Main gas valve defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Locate and correct leaks</li> <li>2. Replace gas valve</li> </ol>
Unit produces unwanted odours	<ol style="list-style-type: none"> <li>1. Gas leak. See warning page</li> </ol>	<ol style="list-style-type: none"> <li>1. Locate and correct leaks</li> </ol>
Flame does not spread full length of burner	<ol style="list-style-type: none"> <li>1. Decorative topping obstructing flame spread</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust topping in obstructed area</li> </ol>
Power on, nothing happens	<ol style="list-style-type: none"> <li>1. No power to unit</li> </ol>	<ol style="list-style-type: none"> <li>1. Check connections between controls</li> <li>2. Check power source</li> <li>3. Verify power adapter is functioning</li> <li>4. If using 3rd party remote control unit verify unit is functioning correctly</li> </ol>
Burner does not light after pilot is lit	<ol style="list-style-type: none"> <li>1. Burner orifice is clogged</li> <li>2. Inlet gas pressure is too low</li> <li>3. Burner orifice diameter is too small</li> <li>4. Flame sensor lead loose or disconnected</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner orifice</li> <li>2. Contact local gas or propane supplier</li> <li>3. Replace burner orifice</li> <li>4. Reconnect or tighten lead</li> </ol>
Burner flame is too low	<ol style="list-style-type: none"> <li>1. Incorrect gas supply or pressure</li> <li>2. Blocked burner orifice or burner ports</li> <li>3. Improper burner orifice size</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for proper gas supply pressure</li> <li>2. Free burner orifice and burner ports of any burrs, paint or other blockage</li> <li>3. Verify proper burner orifice sizing</li> </ol>
Delayed burner ignition	<ol style="list-style-type: none"> <li>1. Pilot flame is obstructed</li> </ol>	<ol style="list-style-type: none"> <li>1. Clear media/debris from lighting port</li> </ol>



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