

MANUAL LIT SYSTEM w/ Flame Supervision Device

Natural Gas (NG)
Linear Burner Systems



fire pit installation and user manual

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inspired, designed, certified and proudly built in Canada
1.877.255.3146:info@solusdecor.com
<https://www.solusdecor.com/>



This user manual contains information that is critical to the installation and operations of your Solus Fire Pits. For safety, please follow these instructions carefully.

This fire pit conform to the following standards:

ANSI Z21.97 – 2004 / CSA 2.41 -2017 *Outdoor Decorative Gas Appliance*

CSA 2.17-2017 *Gas-Fired Appliances For Use at High Altitudes*

CE BS EN 498:2012 *Specification for Dedicated Liquefied Petroleum Gas Appliances*

CE BS EN 509:2001 + A1 : 2003 + A2: 2004 *Decorative Fuel-Effect Gas Appliances*

Made in Canada by Solus Decor Inc.

Building C-109 Braid Street, New Westminster, BC Canada V3L5H4

1.877.255.3146 www.solusdecor.com

PRODUCT RATINGS

GAS RATINGS



Natural Gas (NG)













Inlet Gas Pressure : 7 "W.C.














Manifold Gas Pressure : 2.38 "W.C.







Consistent *Inlet Gas Pressure* is required to avoid weak pilot flame and burner dropouts.

PRODUCT WARNINGS

 DANGER	<p>CARBON MONOXIDE HAZARD</p> <p>This appliance can produce carbon monoxide which has no odor.</p> <p>Using it in an enclosed space can kill you.</p> <p>Never use this appliance in an enclosed space such as a camper, tent, car or home.</p>
	

	DANGER: If you smell gas: 1) Shut off gas to the appliance. 2) Extinguish any open flame. 3) If the odor continues, keep away from appliances and immediately call the gas supplier or fire department.
	WARNING: For Outdoor Use Only
	WARNING: Only Licensed Gas Fitters and Electricians are allowed to install and perform repair services on this fire pit
	WARNING: This Fire pit should be inspected before use and at least once annually by a qualified technician.
	WARNING: This manual contains information critical to the safe installation and operation of the fire pit
	WARNING: Never alter product or configuration in any way
	WARNING: Fuel line sizing and or/regulations are the responsibility of the installer and must be able to supply the stated Product Ratings.
	WARNING: Testing for leaks after installation is the responsibility of the installer.
	WARNING: All fire pits must have a gas shutoff outside of the exterior of the fire pit to allow for emergency shut off and maintenance.
	WARNING: All fire pits with an electric start system, must have an electrical shut off (wall switch or breaker) on the exterior of the fire pit or on an adjacent wall to allow for emergency shutdown and maintenance.
	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: 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: 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: Do not use this fire pit if any part of it has been under water. Call a licensed technician to inspect the fire pit and replace the parts under water as necessary
	WARNING: Do not store or use gasoline or other flammable near the fire pit.
	WARNING: It is the installer's responsibility to ensure a safe installation and to educate the end user about proper operation. Leave this manual with the end user
	WARNING: FOR REMOTE CONTROL USE: To prevent accidental start-up from unwanted RF signals it is the responsibility of the end user to turn off power to the electric outlet for the remote control receiver when the fire-pit is not in use via wall switch or breaker.
	WARNING: This fire pit is not intended to be a starter for wood or any other combustibles.
	WARNING: Select a location where the fire pit can be attended during operation. Never leave an operating fire pit unattended or by someone not familiar with its operation or emergency shut off locations.
	WARNING: Both children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns and clothing ignition.
	WARNING: Young children should be carefully supervised when they are in the area of the fire pit.
	WARNING: Clothing or other flammable materials should not be placed on or near a fire pit.
	WARNING: This fire pit emits very high temperatures - Combustibles must be located far enough away that there is no risk of ignition.
	WARNING: All Solus vessels for Natural and Liquid Propane Gas are vented at the bottom. The ventilation allows for heat and/or residual fuel to escape. The vents also function as a drain to prevent water build-up. These vents must not be blocked or tampered with at any time. Failure to follow this instruction may result in the fire-pit overheating or explosion. Overheating could also lead to heat damage to internal components.
	WARNING: The interior void space of the Solus vessel surrounding the gas valve and electrical box cannot be filled with any material (gravel, crushed rock, concrete, etc.) to allow for proper ventilation.

	WARNING: Solus concrete vessels are HEAVY. Use care and caution during lifting, positioning and repositioning to prevent injury, damage to fire pits and damage to property. Some Fire Pits will require 2 or more people to lift; some may require 4 or more people. The Fire Pit must be evenly supported and level – Shim appropriately as required.
	WARNING: The fire pit must be serviced annually by a professional certified in your jurisdiction.
	WARNING: Installer must confirm the appliance is built for the appropriate gas used – natural gas or LP. Do not use natural gas appliances with LP or LP appliances with natural gas. Refer to the label on the appliance.
	WARNING: To prevent damage, unhook the fire pit from the gas supply for pressure leak tests.
	WARNING: Gas Plumbing Connections: Use only joint compound or tape that is resistant to all gases. Apply joint compound to all male pipe fittings only- DO NOT use on FLARED fittings. Be sure to tighten every joint securely.
	WARNING: An LP-cylinder not connected for use shall not be stored in the vicinity of this or any other appliance

LOCATION OF THE FIRE PIT

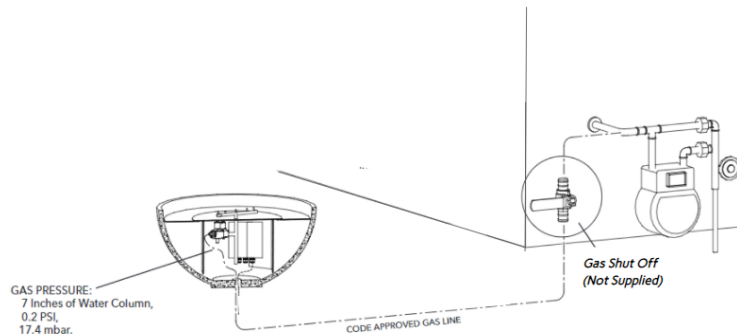
All Solus Decor fire pits are intended and designed for **Outdoor Use Only**.

Stable Surface

The Solus fire pit vessel must be placed on a stable and flat surface. Select a location with good drainage that allows easy access for installation and maintenance of the fire pit.

Consider the location with less unfavorable winds

Solus Burner is designed to withstand 10MPH (16.0934KPH) wind speed. Consider purchasing a Solus WindShield if the location is prone to severe and unpredictable wind activities like open beachfront spaces or high rise building patios and balconies.



Gas Shut Off

All Fire pits must have a gas shut-off mechanism located outside of the appliance. This gas shut-off mechanism must be accessible for emergency shut-off and maintenance. Please note that the Key Ball Valve outside the vessel of this firepit is not a shut-off mechanism. This Key Ball Valve is used to regulate the flame height and flame intensity.

FIRE PIT CLEARANCES

Horizontal Clearance

Concrete vessels must be at least 16 inches (0.5 meter) away from any combustible structure and/or materials.

Vertical Clearance

Clearance between the burner and any structure overhead must be at least 77 inches (1.95 meter) from any combustible structure and/or materials.

UNPACKING

The fire pit will arrive in an exquisite crate, fully foamed padded. Carefully inspect the crate for damages during delivery. Open the crate immediately if any damages are observed. Document the damages through photographs and report to Solus Decor at once.

Crate Check

Customers are required to report any crate damages within 24 hours of receiving the crates.

Contents Check

Furthermore, it is the customer's responsibility to check it's contents within 48 hours from receipt of the shipment to check for content damages.

Solus is not responsible for damages reported beyond these timelines.

GENERAL LIFTING GUIDE

WARNING:

These concrete products are heavy and bulky. Moving these concrete products may require multiple people. Refer to the table on the next page.

Product Type	Lbs	Kgs	Number of Person Needed to Lift
Firetable Base	74	34	2
Firetable Box	243	110	2-3
Firetable Top	134	61	2
Tavolo Base	75	34	2
Tavolo Box	243	110	3-4
Tavolo Top	410	186	4

INSTALLATION and OPERATION

WARNING:

Installation and repair must be done by Licensed Gas Fitters. The fire pit must be inspected before use and at least checked or serviced annually by a qualified service technician. Cleaning may be required frequently as necessary. When a fire pit is not in use, an all-weather cover or metal top must be used to avoid water and moisture build-up and to protect the fire pit from environmental hazards.

- *Fire Pit Ratings* : Check the Output BTU Ratings of the fire pit and ensure the following requirements are followed.

Gas Rating (NG) :

Natural Gas (NG)

Inlet Gas Pressure : 7 "W.C.

Manifold Gas Pressure : 2.38 "W.C.

- *Inlet Pressure* : This is the input gas pressure coming from the main gas line going to the fire pit. Reading must be taken only after all other gas appliances on the main supply are on and running at full capacity.
- *Manifold Pressure*: This is the pressure at the manifold when the burner is on.
- *Gas Requirement* : Consistent ***Inlet Gas Pressure*** is required to avoid weak pilot flame and burner dropouts. **THIS IS AN ABSOLUTE PRIORITY**. The reading must be recorded and written on the installer's card and must be given to the owner/end user. Owner's must keep this card for future use and servicing.

Locate all the components

- Installer Package
- 3" Valve Keys
- 1/2" Yellow Flex Line
- Burner Assembly
- Concrete Box – Ball Valve
- Concrete Box – Flame Supervision Device



- RV47 Regulator

Gas Connection

- Make sure that the gas shut-off valve (emergency shut-off valve) of the appliance is closed when connecting the gas lines.
- Gas connection between the burner and flame supervision device/Ball Valve is pre-connected in the shop.
- Connect the end of the NG main supply line to the regulator.
- Test all gas piping and connections for leaks after gas connections
- Do not use an open flame to check for leaks.

Operation

Turning ON the MLS/FSD – NG System

- Read instructions very carefully.
- Remove any covers prior to operation.
- Confirm that the gas shut-off valve (emergency shut-off valve) is open.
- Locate the Ball Valve and the Flame Supervision Push Button
- By using the 3" Key (supplied), turn the Ball Valve freely counter-clockwise.
- Push and hold the Flame Supervision Button for 10-20 seconds and then apply a flame with a barbeque lighter to the pilot and the thermocouple inside the pilot assembly cage. Maintain this step until a pilot flame is established,
- Once pilot flame starts, move the barbeque lighter away from the burner and release the flame supervision button.
- Use the 3" Key to adjust the flame to desired height.

Failure of the system to detect gas flow and initiate a fire may require bleeding or purging of air of the gas lines. This happens when the fire pit is not used for weeks or months. To saturate the lines with gas and encourage gas flow, repeat the steps above until flame pilot flame appears and the burner manifold is lit.

Turning OFF the MLS – NG System

- By using the 3" Key (supplied), turn the valve freely clockwise.
- Make sure flame is totally out
- Close the gas shut-off valve (emergency shut-off valve).
- Allow the burner to cool down before installing the cover, if available.

WARNING: Consistent *Inlet Gas Pressure* is required to avoid weak pilot flame and burner dropouts.

MEDIA INSTALLATION

WARNING:

Do not install any refractory stones (decorative river rocks) or lava rocks that are not supplied by Solus Decor. Landscape stones and other natural materials may explode when heated.

Lava Rock



Refractory Stones



WARNINGS:

Do not dump media over the burner and or the nozzles.

Keep the pilot cage free and clear of any refractory stones and lava rocks.

Improper media installation may cause regressed pilot flame, burner ignition issue or can damage the thermocouple and thermosensor.

Lava Rock Bed

Cover the entire burner plate with lava rock. Add enough layers of lava rocks until it reaches the underside of the burner. ***Do not cover the nozzles with lava rocks.*** Make sure no dust or other particles are inside the nozzles prior to lighting. When a fire pit is equipped with a Pilot Assembly, make sure that there are no lava rocks inside the pilot cage.

Refractory Stone Placement

A small pool of decorative river rocks should be placed on and around the burner. Make sure that no rocks are blocking any of the burner nozzles. Rearrange these stones around to deflect flame into a natural appearance, this is referred to as Flame Sculpting.

GENERAL CARE AND MAINTENANCE

KEEP THE FIRE PIT COVERED WHEN NOT IN USE

Ensure that gas and power (when applicable) are shut off and the fire pit is cool before performing any service and maintenance.

We recommend that a qualified service technician performs the following maintenance procedure at the beginning of each fire pit season.

Cleaning the Burner Nozzles

Periodic check, inspection and cleaning of the burner assembly is recommended. This is to avoid unusual and unwanted flame behaviour as well as ignition failure. To clean the burner nozzles, remove the refractory stones and lava rocks to allow access to the burner. Use a scotch green pad or 320 grit sandpaper or a brush to scrape soot and remove any dust, spider web or any



particles. To check for nozzle clogs, use a small paper clip or needle and carefully insert in the burner nozzles. Remove any clogs if any.

Cleaning of Pilot Assembly

A clean and clear pilot assembly is important to the operation of the fire pit. Pilot not lighting, gas valve not opening, gas flow not initiating, flame dropouts, to name a few are common occurrences of a dirty and un-maintained pilot assembly. Hence regular inspection and maintenance is recommended.

Components of the Pilot Assembly

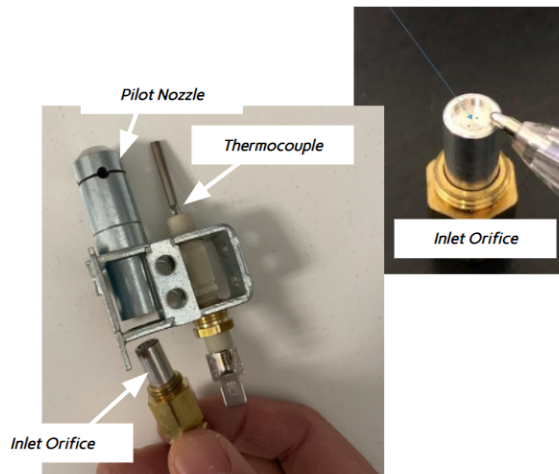
1. Pilot Nozzle

Remove the pilot cage carefully. By using a knife or any sharp blade, remove any build-up along the 1/16" slit of the nozzles. Purge the debris or dust off using compressed air or using a vacuum cleaner.



2. Inlet Orifice

The Inlet Orifice can be removed from the bottom of the pilot assembly (bottom of burner plate) using a 7/16 wrench. Clean the two (2) tiny holes on top of the Inlet Orifice and ensure that you can see through the 2 tiny holes.



3. Thermocouple

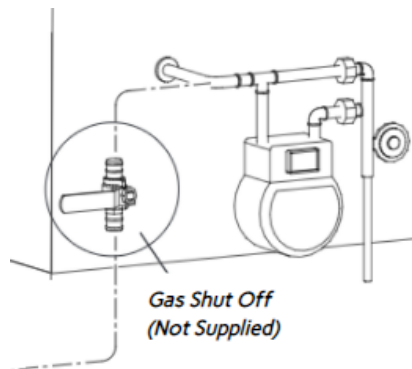
Use a scotch green pad or 320 grit sandpaper to buff and clean the tip of the metal stem of the thermocouple.



END OF THE SEASON CHECKLIST

When the fire pit is not going to be used for months (although it can be enjoyed year round), it is important to follow this end of the season checklist.

Shut off Main Gas Supply



Accessories

Remove all accessories glass shield and propane kit and store indoors

Unwanted debris

Check and remove any unwanted debris that can affect the look of your concrete fire pit.

Pilot Assembly

Check and remove any debris inside the pilot cage. Any debris can trap moisture during storage and can result to clogged and blocked pilot orifice

Clean exterior of the fire pit

Moisture, dirt, dust and other surface contaminants must be wiped and cleaned. Use warm water and soap.

Cover your firepit

This is to protect your investment.

START OF THE SEASON CHECKLIST

The end of the season checklist is developed so fire pits can be used when the next opportunity happens. If the recommendations were followed, this fire pit should be as good as ready.

Remove Cover.

Solus provided all-weather covers are water resistant. Check the burner/pilot assembly and media for moisture. If they are wet, allow the components to dry. Please see the troubleshooting guide for instructions.

Inspect Gas and Supply Lines.

Inspect all connections and switches prior to operation. Treat this as a new installation. Look for debris and kinks along the gas lines.

Inspect Burner.

A clogged and dirty burner nozzle can cause so many different issues. It restricts and blocks gas flow. Check and clean each nozzle when necessary. Water inside the nozzles can also cause the same issue. If water is suspected to have entered the burner and the piping system, contact a licensed gas fitter to drain water from the system.

Inspect Pilot Assembly .

A weak and absence of pilot flame during ignition is commonly caused by dirty pilot assembly. Check and clean each component when necessary using a steel brush and sandpaper. Please see basic care and maintenance instructions

Test Run.

If this fire pit wasn't used for more than one month, please treat this as a new installation and follow the "Turning on" instructions in this manual. Purging of air might be needed.

Clean the exteriors.

Clean the fire pit's exterior and get ready to enjoy another season of outdoor living.

TROUBLESHOOTING

WARNING:

Turn off the fire pit and let it cool before servicing. Only qualified technicians should service and repair the fire pit.

Manual Lit System / Flame Supervision - Common Issues

Issues	Possible Causes	Solutions
No Flame	Key Valve Closed	Open ball valve to allow gas flow
	Air in the line	Purge air from the line/check installation and operation steps
	Low Gas Pressure	Verify Gas Pressure/ Correct as needed
	Water and moisture in the line	Vacuum the nozzles to remove moisture/or alternatively, use a hair dryer
There is pilot flame but does not stay lit	Inlet gas pressure too low or too high	Contact a technician. Verify Inlet Gas Pressure is within recommended ranges, check regulator settings if supplied, adjust accordingly.
	Thermocouple is not hot enough	Push and hold the Flame Supervision Button for 30-60 seconds or until pilot flame appears while applying a flame to the pilot and thermocouple.
	Dirty or broken thermocouple	Clean pilot assembly / Contact gas fitter to replace damaged parts
	Misaligned thermocouple	Align the thermocouple
	Thermocouple loose connection	Secure the connection between the thermocouple and the gas valve
	Dirty Inlet Orifice	Clean the Orifice / Follow General Care and Maintenance Procedure
	Strong Wind	Install a glass shield / Make sure that the condition is appropriate for use
	Dirty Pilot Assembly	Clean pilot assembly / Follow Basic Maintenance Steps
Steady pilot flame but main burner does not light	Inlet gas pressure too low	Contact a technician. Verify Inlet Gas Pressure is within recommended ranges, check regulator settings if supplied, adjust accordingly.
	Small / weak pilot flame	Clean Pilot Assembly / Follow General Care and Maintenance Procedure Contact a technician. Verify Inlet Gas Pressure is within recommended ranges, check regulator settings if supplied, adjust accordingly.
	Dirty Thermocouple	Clean thermosensor / Follow General Care and Maintenance

		Procedure
	Misaligned Thermocouple	Align the thermosensor
	Thermocouple loose	Secure the connection between the thermosensor and the gas valve / Contact gas fitter to establish connections
	Clogged or Dirty Burner Nozzles	Clean nozzles and check for obstruction
Main burner lights but drops out intermittently	Inlet gas pressure too low	Contact a technician. Verify Inlet Gas Pressure is within recommended ranges, check regulator settings if supplied, adjust accordingly.
	Small / weak pilot flame	Clean Pilot Assembly / Follow General Care and Maintenance Procedure Contact a technician. Verify Inlet Gas Pressure is within recommended ranges, check regulator settings if supplied, adjust accordingly.
	Dirty Thermocouple	Clean thermosensor / Follow General Care and Maintenance Procedure
	Misaligned Thermocouple	Align the thermosensor
	Thermocouple loose	Secure the connection between the thermosensor and the gas valve / Contact gas fitter to establish connections
	Strong Wind	Install a glass shield / Make sure that the condition is appropriate for use

WARRANTY INFORMATION

Solus warrants that each Solus Fire Pits conforms to CSA, ANSI, CE and UKCA standards for *Outdoor Decorative Gas Appliance*. All concrete products are professionally inspected and passed Solus' above industry quality standard, and each and every gas burner burned and fire tested prior to leaving the Solus facility in Vancouver.

This warranty is voided if the fire pit is not installed by a licensed technician and if not maintained and operated according to the installation and user's manual. This warranty is also voided if product is modified, altered and tampered with and if a third-party parts and components were used during repair and maintenance.

Warranties are limited to the original purchaser only.



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<https://www.solusdecor.com/>

Upon Receipt of the Crate

Solus spared no expense on packaging these fire pits. These products are crated and packed to museum quality standards. However, things can happen along the way. The purchaser, upon receipt of the crate, must visually inspect the crate for damages. Report any crate damages to Solus within 24 hours. Additionally, the content of the crate must be visually inspected within 48 hours. Report to Solus immediately. Solus is not responsible to any damages not reported beyond the specified timelines

Parts Only Limited Warranty

Solus will, at its election, repair or replace the part or product where Solus inspection discloses any such defect occurring with normal usage. Solus will replace all warranted parts free of charge. Client is responsible for the cost of shipping, duties and custom charges when applicable as well as the service and labour cost, re-installation and disposal of the replaced parts and components.

Solus does not provide onsite repair, visits or service.

This warranty does not cover damages to parts and products caused by inappropriate or improper installation, unauthorized modifications to the burner, vessel and parts, and improper maintenance such as failure to put the all-weather cover or metal top when fire pit is not in use.

Concrete Vessels Limited Warranty

Solus concrete products weather and tarnish through exposure to natural elements over time. This naturally occurring process is called Patina.

It is a very rare occasion that a vessel will fracture. Solus will replace cracked and broken concrete vessels resulting from structural defects. Client is responsible for any costs associated with crating, shipping, handling, re-installation labour or disposal of replaced products or components.

Non-structural hairline and spider web-like cracks, surface air voids, chips, scratches and abrasions or minor dimples will not affect the quality and performance of the fire pit therefore shall not be covered by this Warranty. Damages due to excessive loads, for example: Solus fire tables and bowls are not designed for seating purposes and are also not covered by this Warranty.

Any slight variation from the samples received, surface discoloration, texture changes and stains due to exposure to elements like salts, acids, birds droppings, insects, spilled drinks, greasy food and other harmful liquids also is not covered by this Warranty.



General Exclusions

This Warranty also excludes damages to the fire pit occurring due to accident, fire exposure, damages caused by wind and flooding, vandalism, ground movement, neglect, misuse and

Warranty Summary

Type	Components	No cover or metal tabletop purchased	Solus All-Weather cover and/or metal tabletop purchased
Manual Ignition w/Flame Supervision Fire Features	Brass Burner and brass fittings Concrete Vessels Auto Shutoff Gas Valve Thermocouple Universal Pilot	5 years 1 year 1 year 1 year 1 year	25 years 5 years 3 years 3 years 3 years

PRODUCT REGISTRATION

Thank you for purchasing a Solus Firepit! To protect your investment, please register your fire pit within 30 days of installation. Please fill in as much detail as possible. As noted in our Limited Product Warranty, professional registration number and gas pressure readings are required to engage a warranty claim in the unlikely event that one is necessary.

CONTACT INFORMATION:

Name: _____ Organization/Company: _____

Address: _____

Telephone Number: _____ Email: _____

PRODUCT INFORMATION: (please retain proof-of-purchase)

Order #: _____ Firepit Model: _____ Fuel type: ☐ Natural Gas ☐ Propane ☐ Ethanol

Ignition type: ☐ Manual Light ☐ Manual Light w/Flame Supervision Valve ☐ Automatic (Electronic)

Date purchased: _____ Date of Install: _____

Product purchased: ☐ Solus directly ☐ Specifier / Contractor ☐ Reseller

BURNER SERIAL # _____

Gas Fitter Name: _____ Gas Fitter Registration #: _____

Gas Fitter Signature: _____ Date Signed: _____

Inlet Gas Pressure Reading : _____ Test Completed : Yes _____ / No: _____



How to submit the completed Product Registration Form?

North America - Return to:

Solus Decor Inc
Building C- 109 Braid St
New Westminster, BC V3L 5H4
Canada

Or scan and email to info@solusdecor.com

Or complete online at: www.solusdecor.com/warranty

PARTS LIST

Parts Number	Parts Description
P02085	3" Key
P02185	Ball Valve
P01985	Ball Valve & Flange
P02180	1/2" Yellow Flex Line (36")
P02182	1/2" Yellow Flex Line (26")
P02002	Gas Regulator (NG) RV47L
P01992	Burner Nozzles (NG 10K)
P02072	Solus (NG) MLS Burner Package
A01820	Pilot Cage
P02008	Thermocouple
P01997	High Temp Auto Shutoff Valve
P02009	Universal Pilot with Inlet - NG
P02004	1/4" Pilot Tubing
P02001	NG Inlet Orifice (3223)
P01999	Inlet Fitting with Compression
P02023	Quick Connect Assembly